VOL. III FEBRUARY NO. IX

MONTANA WILD LIFE

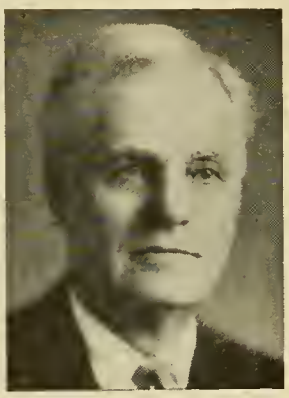
ARSENIC PEAK - Elk range in the Sun River Canyon

Photo by PAUL J. FAIR

OFFICIAL PUBLICATION OF THE MONTANA STATE FISH and GAME DEPARTMENT

For Fish and Game

GOVERNOR JOHN E. ERICKSON, Montana's chief executive who has delivered a constructive message to four consecutive sessions of the legislative assembly, emphasizes the necessity for wholehearted support of the program of conscientious conservation in which the State Fish and Game Commission is engaged, in his message to the twenty-second assembly. In the message, delivered at a joint session of house and senate Tuesday, January 6, Governor Erickson said of fish and game:



Governor J. E. Erickson

"No enumeration of the natural resources of the state would be complete without reference to our fish and game. The department charged with the protection and propagation of wild life and fur-bearing animals is self-supporting, its operating costs being met wholly from the sale of licenses and permits, fines collected and confiscations made. In the last few years the number of fish hatcheries has been increased from three to fourteen. New spawn-taking stations and many rearing ponds have been established, and a pond cultural station has recently been constructed at Miles City, where warm-water fishes suitable for the warmer waters of eastern Montana are reared. Duck food has been planted and numerous game birds imported and liberated. Last year a game farm was established and from this nearly 6,500 Chinese and Mongolian pheasants have been liberated.

"The commercial value of fur-bearing animals, the food value of fish and game and their recreational value to the resident and visiting sportsman aggregate a huge sum, and any proposal that tends to the greater efficiency of our fish and game department is worthy of your serious consideration."

MONTANA WILD LIFE

The Official Publication of The State Fish and Game Commission

VOL. III HELENA, MONTANA, FEBRUARY, 1931 NO. 9

The Big Game Tagging System

By Floyd L. Smith, Editor, Montana Wild Life

ONTANA'S position as one of the envied big game states of the union has stressed the fact that as long as big game remains there will be poachers and law violators and as long as these miscreants are active, methods of protecting and preserving big game must be made more efficient and strict. As an aid to protecting the game, shielding the interests of the legal hunter and aid in law enforcement regarding the taking of elk and deer, the tagging system adopted by many states has proven unusually effective. Hence, the adoption of the system has been recommended for adoption by the state legislature by unanimous vote of the Montana Sportsmen's Association.

For the information of Montana big game hunters, the State Fish and Game Commission has made a survey of methods in use in other states and the perusal of information secured is vitally interesting. Such states as Minnesota, New York, Wisconsin, Maine, Nevada, California and other regions where big game abounds, have adopted the tagging system such as is proposed in Montana.

One of the most interesting of the collection is the system utilized in Minnesota. George McCullough, commissioner of the Minnesota Fish and Game department, explains that the system has resulted in the conservation of deer. A separate big game license is required. With it goes a metal self-locking seal such as is used on boxcars, bearing the same number as that of the license. The license itself is divided into three parts which, when folded, make it the size of a postcard. At the right are three tags, each of which is fitted with a metal eye, which must be attached to a deer hide, deer head or the deer itself, when shipped. These coupons must be detached from the main body of the license and attached to the deer when it is killed and as a double precaution the metal seal locking device must be attached before the animal is offered for trausportation. Licenses cannot be purchased without the metal locking device and the license fee is $2.25. On the reverse side of the license is an excerpt from the game laws and a postcard addressed to the fish and game department. The state law makes it mandatory that the holder of the license fill out this postcard showing the sex of the deer killed, fawn or bear, the county where it was killed and the dates.

Licenses In 1930 Reach 82,331

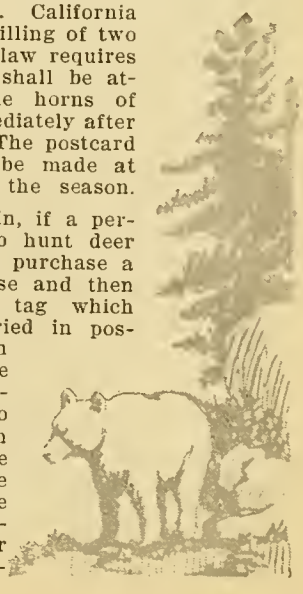
BUSINESS depressions and commercial upheavals may have an effect on industrial activities, but the drain on fish and game continues despite the assumed dollar shortage. This fact is brought out in figures compiled at the close of 1930, showing that the sale of resident hunting and fishing licenses reached 82,331 as against 83,338 for 1929. The last two years have witnessed the heaviest sale of licenses in the history of the department, which signifies the heaviest drain on fish and wild life with resultant steps required to replace it. Reports that tourist travel has diminished fail to be apparent in fish and game figures, for 4,732 non-resident fishing licenses were sold in 1930 as compared with 4,793 in 1929—a difference of only 62. The total license sales since 1916 are shown in the following table:

	Resident Licenses	Non-resident Fishing
1916	69,466	1,082
1917	72,113	1,012
1918	42,744	741
1919	70,429	252
1920	52,751	1,305
1921	59,348	1,879
1922	50,508	1,620
1923	64,202	2,193
1924	56,113	2,064
1925	73,042	3,369
1926	71,249	3,133
1927	67,083	3,320
1928	75,063	4,335
1929	83,388	4,793
1930	82,331	4,732

One of the most interesting of the collection of deer tags is that produced by the New York department of conservation. The buff-colored license is printed on cloth glossed with paper and is about 12 inches long and four inches wide, covering the tags, return check, and license proper and the stub. C. E. Underhill, deputy chief warden, writes that the system has been of vital importance to the department, in that it immediately identifies a deer as legal or illegal while the reports made to the department give a correct check of deer taken in every county each season by local license holders. Problems of scarcity or over-grazing may be met when these figures are known. The law requires that the return coupon be mailed to the state department not later than November 20 immediately following the closing of the season, telling in which killed, number of points on horns and the name and address of the hunter. In New York four tags are supplied, one tag being designated for each quarter of the deer and all bearing the license number. Each tag likewise bears the name and address of the license holder and is labeled with the designation of the quarter to which it must be attached. If the hunter holding this license is found with a quarter of deer not properly tagged, it is visible evidence that the deer has been illegally taken and prosecution follows.

The Nevada system provides for the issuance of three joined tags, each the size of ordinary shipping tags, printed on heavy cardboard. The stub retained by the dealer is attached to the license proper giving the description of the hunter and then is attached the tag equipped with a metal eye. This tag must be attached to the deer when killed and remain on the carcass. When countersigned by a game warden the tag is authority to ship. The return postcard, which must be sent to the state department, provides required information regarding the deer. Possession of an untagged carcass is a violation of law.

The California tagging system is similar to that of Nevada. According to a letter received from conservation headquarters of that state approximately 110,000 licenses have been sold each year since the tag system went into effect. For the season just closed returns were received showing a total kill of 24,131. California permits the killing of two deer and the law requires that the tag shall be attached to the horns of the deer immediately after it is killed. The postcard report must be made at the close of the season.



In Wisconsin, if a person wishes to hunt deer he must first purchase a hunting license and then buy a deer tag which must be carried in possession when hunting. The deer tag corresponds to the number on the license and must be placed on the carcass immediately after the kill. Dur-

ing 1930, the Wisconsin commission placed 80,000 deer tags and 230,000 hunting licenses in the hands of dealers, this being the average annual sale.

Archer L. Grover, deputy commissioner of Inland Fisheries and Game of the state of Maine, writes that the deer tagging system results in material conservation of the herds. The laws of Maine were revised last year to permit use of the coupon on the license in addition to the tagging. Inspection stations are located on main highways during the hunting season and drivers must stop for inspection of their kill on signal from a deputy game warden.

Deer are not permitted shipped outside the state of Maine and if desired transported within the state, the tag, costing $2, must be attached. Another section of the Maine laws provides that no lumber camps, house or other building owner used in lumbering shall have in possession at any time at the camp or serve to any employe any deer or moose. No hunting is allowed on Sunday, whether for birds or game. The use of lights or hunting from an automobile is forbidden. Possession of firearms or fishing tackle without a license is declared prima facie evidence of law violation.

From this collection of systems in use in other states, Montana sportsmen hope to secure the adoption of a deer and elk tagging plan that will be effective. More than 45 clubs of Montana sportsmen have unanimously indorsed the proposed increase in hunting and fishing fees to provide adequate funds for propagation and protection of wild life and in the majority of cases they have stressed the necessity for adoption of the deer and elk tagging system.

IT MAY BE THE MILLENIUM

The editor of the ancient White Sulphur Springs Republican displays the following declaration on the first page of his paper:

"The past year we have been bawled out and balled up, held down and held up, bulldozed and black-jacked, walked on, cheated and mocked, stuck for war tax, excess profit tax, per capita tax, state tax, syntax, Liberty bonds and baby bonds, Red Cross, back cross, green cross and double crossed, asked to help the House of David, G. A. R., Women's Relief and men's relief and stomach relief. We have worked like hell, lost all we had and part of our furniture, and because we won't spend all or lend all of the little we earn and go beg, borrow or steal, we have been cussed and discussed, boycotted, talked to and talked about, lied to and lied about, held up, hung up, and robbed, and damn near ruined, and the only reason we are sticking around now is to see what the hell is coming next."

GOLD NUGGET IN GROUSE

Gus Gilbert of Boise thinks he is entitled to the gold inlaid grouse—in fact, he got it. While hunting on the upper Boise river Gilbert shot a grouse in whose gizzard reposed a gold nugget about the size of a Lima bean. He didn't start a gold rush, however, as none of his other three grouse had gathered any gold.

Fish and Game Committees

MEMBERS of the fish and game committee of the senate and house of representatives of the Twenty-second legislative assembly have been selected. Legislation having to do with revision of the game laws, the adjusted license fee and fish and game generally will be considered by these legislators before presentation to associated members. The membership follows:

SENATE

F. T. McCormick, Musselshell, chairman.
George R. Cooper, Mineral.
Ralph R. Tower, Lake.
Robert G. Pauline, Flathead.
C. F. Gilboe, Pondera.
M. D. Rowland, Lincoln.
Lars Angvick, Sheridan.
M. M. Duncan, Madison.
Sidney A. Willis, Cascade.

HOUSE

Steve C. Arnold, Stillwater, chairman.
Harry H. Buck, Flathead.
M. R. Henderson, Granite
Ralph Dougherty, Ravalli.
Dr. Asa Willard, Missoula.
C. L. Waring, Yellowstone.
Frank G. Knight, Cascade.
Dr. L. E. Haverfield, Big Horn.
Arthur H. Watson, Meagher.
Dennis A. Dellwo, Lake.
R. W. Spangler, Mineral.
Henry Sullivan, Silver Bow.
George S. Martin, Glacier.
John J. Morris, Deer Lodge.
Edward E. Grabow, Park.

Falconry, the art of hunting with trained birds, was known in China about 2000 B. C.

A WISE OLD BASS

A wise old bass 'neath the lily-pads,
Swam aimlessly here and there.
He had feasted well from a school of chub—
A most delicious fare.
When along the surface appeared a thing,
All silver and red and white;
And the old bass laughed till his side fins shook
At this most peculiar sight.
Then he rose to the surface in swift pursuit,
Leaving a silvery trail,
And just as he passed the thing so strange,
He slapped it with his tail.
Then back to the shade of the pads he came,
And as into the moss he dug
He said to himself as he laughed again,
"Nice paint job on that plug."

—Field and Stream.

A REMARKABLE COINCIDENCE

A male pintail duck, banded at the Bear River Marshes, Utah, on September 10, 1929, and a female, banded on the same day at Dawson, N. D., 500 miles to the northeast, were both killed on the same day by the same man at the same place—Toluca, Mexico. Of the thousands of valuable and interesting recoveries of banded birds reported this is one of the most remarkable. Toluca, where the pintails were killed, is near Mexico City, about 1,700 to 2,000 miles from the places where they were banded.

Montana's Buck Law Brings Benefits

THIS group of three members of the Upper Musselshell Valley Sportsmen's Association are strenuous exponents of the Montana buck law. From left to right they are: T. W. Hicks Jr., George Phillipi and Frank Brunner, vice-president of the club at Harlowton. Brunner killed the bear as well as a buck. According to L. R. Daems, secretary of the club, a 30 per cent increase in deer has been noted in the district with the buck law effective, despite the fact that more big game was killed in that region this year than ever before. A similar increase in ducks was noted since the planting of duck food by the State Fish and Game department in many lakes and sloughs. Hundreds of other lakes in the state require this attention.

The Evolution of the Dude Ranch Industry

By I. H. LAROM of Valley, Wyo., President Dude Ranchers' Association

I. H. Larson

THERE'S a six and one-half million dollar lariat rope twirling 'round in Wyoming and Montana! No, it's not the regulation twist of hemp that used to feel so fatal when it was tucked in a long knot under the left ear. This rope is a pleasure to be around, or inside of, depending on your viewpoint. This gigantic double-state lariat is composed of nearly 100 up-and-coming members of the Dude Ranchers' Association—one of the peppiest go-getting groups in this nation of go-getters.

Here's the tale of a baby, the short story of dude ranching. There once was an infant, a pretty lusty kid from the start, who was just a little bit smarter than the old mousetrap maker of the woods. The youngster opened his eyes on blue western skies about 26 years ago. He was a pretty lonesome kid for a while because he didn't have any parents. The west, where this boy was born, took a squint at the baby when he was still just a little bandy-legged bundle of nothing — and frowned. There wasn't much could be done for him, he'd have to scramble for himself if he wanted to get along in this man's country. Well, with the help of a big bunch of foster fathers that included such well known assets as the mountains, the forests, the streams and the lakes and innumerable others that liked the kid, he "scrammed" for himself—and got along.

The boy liked the country and pretty soon the country began to like the boy. Then, one day, the kid came out of the woods and a bunch of smart fellows that hadn't noticed him before saw that the youngster had possibilities. They took him out and dressed him up in one of the rip snortin'est cowboy outfits that ever was, and took him to town. That happened six years ago. The kid was the dude ranching industry, just out of adolescence. The fellows that dressed the boy up were the pioneer members of the Dude Ranchers' Association.

And how that boy has grown. Today the approximate value of dude ranch outfits in Wyoming and Montana totals nearly $6,500,000. In 1929 the amount was about $6,225,800 and the industry is still getting bigger — and better. The approximate receipts of the dude ranches during 1929 and 1930 were $3,942,000. Dudes, it is estimated, spent about $207,000 with Wyoming and Montana merchants in each year of 1929-30.

It didn't take any "ballyhoo" to bring that orphan kid up in the right way, either. This new million dollar industry has just as legitimate a line of sales appeal as the air and the sun have in getting people to use them. It is natural and easy to be a dude, it's just like eating and sleeping—and a darn sight more interesting. It is a well-known axiom that you don't have to sell something that people want. Just show them where it is and they'll come and get it for themselves. That is what the dude ranchers have done.

The dude rancher's stock in trade is solid. It doesn't fluctuate—despite what the stock market may be doing. The scenery and the game were in the land that now constitutes the dude rancher's front yard—were there for hundreds, and probably thousands of years before the Bank of England and the United States treasury and such other modern paragons of stability were even thought of. When the dude invests in a vacation on a Wyoming or Montana dude ranch, he's placing his money in something that will bring him an incomparable amount of health and recreation just as sure as Old Faithful will fling a steaming, snow-white jet into the air every sixty minutes.

Enhancing the showcase of nature is a thing which can be found in unlimited quantities only in the west—that is a combination of character and personality. These two things are as fundamental to the success of dude ranching as are the peaks and the pines. Without them, the dude would miss the biggest kick that now exists on the Wyoming and Montana dude ranches. And if there is any doubt as to whether or not the dude ranchers possess these two requisites — witness the meteoric progress of dude ranching since it has been taken seriously.

Scenery, hunting and fishing, horseback riding, hiking and any one of a great number of things go hand-in-hand with the spirit and atmosphere of the west in making dude ranching a pleasure and a profit to the ranchers and dudes alike.

Game and fish—memories of Ike Walton and innumerable anglers and nimrods—the states of Wyoming and Montana and the Dude Ranchers' Association have worked zealously hand-in-hand for the conservation of its wild life assets. Assets whose replacement probably could never be accomplished once they became extinct within the states' boundaries. Assets upon which no physical estimate of value can be placed—because there is no gauge of big enough proportions or of varying enough scale to properly measure them. Wyoming and Montana have an envious record for game and fish conservation.

The east awakened one day to the fact that it had exterminated its wild life. The heath hen, the passenger pigeon, the prairie chicken, and many species of the finny tribe had gone to the bourne of the past, and there was no returning. Western states had the advantage of the experience of the east, but even these, many of them, were irrevocably careless and can now do nothing but regret. When the antelope was threatened with extinction, Wyoming and Montana pioneered in the work of restoration of this little creature of the plains, and today antelope herds in great numbers roam the plains of the two states in silent testimony of good work. The elk, one of the grandest of game animals, which once wandered in vast numbers from the Alleghenies to the Pacific, exists practically now in only Wyoming and Montana — because of conservation efforts of those states.

Fish and migratory and other game birds, as well as numberless minor branches of the wild life family, are all the beneficiaries of concerted and systematized efforts at conservation in Wyoming and Montana. Streams well stocked with trout and other fighting fishes, lakes and fields that echo with the sounds of wild birds, and game at home are the present results of this work.

The dude rancher knows the value of fish and game. He, probably, more than any other private citizen, realizes and appreciates the work of authorized federal and state conservationists.

And when the office-satiated, tired-out business man of the east comes west for a longed-for sight of wild game and the tug of a trout at the end of his fishing line—the dude rancher knows the dude is going to get those thrills.

Among other things, incidentally, that the dude rancher has accomplished while raising the industry to a strapping youth, has been to get a couple of aggravating quotation marks removed. The operation was accomplished not so long ago without the use of anaesthetics. A couple of energetic wranglers took their lariats from their saddle horns and hooked on to the quotation marks around the old style "dude" appellation, and now it is just plain — dude — without benefit of the formal quotes. That gesture made the word as plain and homely as the hospitality of the dude ranches, which puts it in a class by itself in the English language.

"Pleased to meet you," as the follow-up phrase of an introduction in western dude-land, is now "out." For it, has been substituted another that roughly but in simple elegance expresses the spirit of the dude rancher. It is: "C'mon out and let's get used to each other."

Montana Sportsmens' Association

Twelfth Annual Meeting, January 9-10, at Helena

Glen A. Smith
Chairman

DELEGATES and champions of the cause of fish and game from all parts of the northwest, who attended the twelfth annual meeting of the Montana Sportsmen's Association at Helena, January 9 and 10, left the two-day gathering with the knowledge that they had participated in one of the most enthusiastic and important sessions of the 12-year-old association. Much constructive legislation was mapped out after thorough discussion, the 1931 program of education of the association was indorsed, the revision of the hunting and fishing license fees was worked out and recommended to the legislature and all 1930 officers were re-elected. Glen A. Smith of Missoula, chairman of the governing board, presided, with Ben F. Gerry of Missoula, secretary. Meetings were held at the Placer Hotel. The feature entertainment of the convention was the banquet the night of January 9, attended by many members of the legislature, at which motion pictures taken by Paul J. Fair at the state game farm, at the largest spawn taking station at Georgetown lake and of big game in their native haunts, were displayed and heartily applauded.

Directors who were re-elected were: Dr. W. M. Copenhaver of Helena, Dr. J. H. Garberson of Miles City, Ed M. Boyes of Libby, and A. H. Croonquist of Red Lodge. At a meeting of directors, with Fred B. Williams of Bozeman, L. A. Smith of Lewistown and Glen A. Smith of Missoula as the holdovers, Glen Smith was re-elected chairman.

Recommendations of the committee on legislation, with L. R. Daems of Harlowton as chairman, were approved without dissenting vote.

Alert to conditions of fish and game within the state, delegates formulated a plan to request the legislature to adjust the resident hunting and fishing license fees in order that the campaign of conscientious conservation may be continued without handicap. The program has been approved by more than 45 clubs. The following schedule of license adjustments was proposed to the legislature:

Fishing, $2.

Hunting upland birds and migratory water fowl, $2.

Combination fish and bird license, $3.

Hunting big game, $2.

Deer and elk tags to be attached to big game license and holder to make report of kill to State Department with penalty for failure.

Montana's resident hunting and fishing license fee has been left at $2, since 1921, and during the 10 years, the demands on field and stream have attained unprecedented proportions. In order that the State Fish and Game Commission may keep pace with progress in operating 14 hatcheries, five spawn-taking stations, the state game farm, and continue its program of constructing dikes and dams for nesting grounds for migratory water fowl, install more rearing ponds to raise larger fingerlings, and meet increasing demands, sportsmen of the state, whose money supports the department, have asked the legislature to allow them to provide more adequate funds.

B. F. Gerry
Secretary

Other legislative changes approved by the state association include the following:

It shall be unlawful for any person to fish with or have in his possession salmon eggs or imitations thereof.

It shall be unlawful for any person to shoot game birds or game animals on or from a public highway or railroad right-of-way.

It shall be unlawful for any person to use artificial light in hunting and fishing.

That the state fish and game laws be made to comply with federal laws pertaining to the use of airplanes in hunting.

It shall be unlawful to catch more than 25 game fish or more than 20 pounds and one fish in any single day.

That it is the sense of the state association that the State Fish and Game Commission shall have the power to open and close, regulate and provide the open seasons on all fish, game birds and fur-bearing animals.

That the State Fish and Game Commission may be empowered to modify and amend the boundaries of any state game or bird preserve.

Resolutions adopted pertain to the naming of committees to obtain facts

Members of the Governing Board of Montana Sportsmen's Association

J. H. Garberson
Miles City

E. M. Boyes
Libby

W. M. Copenhaver
Helena

L. A. Smith
Lewistown

F. B. Williams
Bozeman

A. H. Croonquist
Red Lodge

relative to the grazing of livestock on game areas in national forests, the selection of committees to make a survey vey of game conditions with a view to bettering the feeling between farmer and sportsman; that a scientific study be made of Chinese pheasants and their effect on crops.

The association commended the State Commission for its efficient work despite the shortage of funds, paid a tribute to the foresight of the Commission in publishing MONTANA WILD LIFE, its official publication, and recommended that the magazine be given general circulation throughout the state and west.

The following clubs were represented:

Upper Musselshell Valley Sportsmen's Association, L. R. Daems.

Libby Rod and Gun Club, E. M. Boyes.

Big Timber Rod and Gun Club, C. W. Haas and E. R. Patterson.

Valier Rod and Gun Club, L. N. Johnson and J. M. Newell.

Anaconda Angler's Club, Dave Morgan and J. J. Harper.

Custer Rod and Gun Club, W. H. Bartley.

Bozeman Rod and Gun Club, Fred B. Williams.

Hamilton Sportsmen's Club, F. J. O'Donnell.

Butte Angler's Club, William Carpenter.

Laurel Rod and Gun Club, C. E. Price.

Northern Lewis and Clark Sportsmen's Association, Sam Harris and J. A. Cummiffs.

Lewis and Clark County Rod and Gun Club, H. E. Bower.

Lewistown Rod and Gun Club, L. A. Smith.

Choteau Rod and Gun Club, William Lockhart and Mr. Craig.

Billings Rod and Gun Club, S. G. Tonkin.

Forsyth Rod and Gun Club, W. H. Bartley.

Illuminating and highly interesting addresses regarding different branches of fish and game conservation were made by recognized leaders in the work. Among the speakers were Thomas N. Marlowe of Missoula, chairman of the State Fish and Game Department; David Madsen of Washington, D. C., now associated with the national parks service and former superintendent of the Bear River marshes in Utah; Robert H. Hill, state fish and game warden; George A. Mushback, new superintendent of the Bear River Marshes; Kenneth F. Roahen, United States game protector who succeeded Mr. Mushback at Billings; Earl A. Fry of the duPont game research foundation; William M. Rush, in charge of Montaua's elk study; Thomas O. Peasley, deputy state game warden; M. D. Chatfield, Helena sportsman, who fathered the bill in the 1921 legislative session which created the present commission form; Kenneth F. MacDonald, state superintendent of fisheries; A. C. Baumgartner of Great Falls, who has won the distinction of selling more hunting and fishing licenses than any other dealer; R. E. Bateman of Billings, leader of predatory animal control; George Baggley, chief ranger of Yellowstone park, and the delegates from affiliated clubs.

Fish and Game Funds at Low Mark

MONTANA'S fish and game funds are now at the lowest mark since 1916—fifteen years ago, yet demands for additional restocking of field and stream, rearing ponds, hatchery operations and kindred conservation projects have reached an unprecedented point.

Operation of the department is financed solely by funds paid by sportsmen, fines and the sale of confiscated articles. Not a dollar of tax money or appropriations from the general fund goes into the work. Hence sportsmen of the state have asked the legislature to permit them to pay adequate funds in the form of the split license fee. The following figures from the books of the state treasurer show the balance in the fish and game fund at the close of each year since 1915:

1915	$ 20,421.77*
1916	17,052.09
1917	46,185.01
1918	81,899.13
1919	94,244.02
1920	113,126.36
1921	36,234.26
1922	54,568.22
1923	29,853.77
1924	52,597.37
1925	94,753.89
1926	107,003.58
1927	82,457.44
1928	97,084.93
1929	98,504.22
1930	27,909.78

The following revised schedule of membership dues of the state association was approved:

Clubs with 300 members or more, $50.
Clubs with 250 to 299 members, $45.
Clubs with 200 to 249 members, $40.
Clubs with 150 to 199 members, $35.
Clubs with 100 to 149 members, $30.
Clubs with 75 to 99 members, $25.
Clubs with 50 to 74 members, $20.
Clubs with 25 to 49 members, $15.
Clubs with less than 25 members, $10.

Individual membership (not iucluded in clubs) $1.

Life membership, $25.

Assisting membership (individual) $5.

Associate membership (individual or firm) $10.

Sustaining membership (individual or firm) $25.

Contribnting membership (individual or firm) $50.

Promoting membership (individual or firm) $100.

Club memberships are to be based upon the number of paid-in members as of June 1st or the membership of the previous year. If the dues paid on or before June 1st do not cover the membership of any club as of December 1st, then such clubs shall remit the proper amount to cover all additional members not included in their previous remittance.

The report of Secretary B. F. Gerry, covering the period between September 8 and December 31, 1930, was read and he was given a vote of thanks. Mr. Gerry's report follows:

"I took over the duties of the secretary of this association on September 8, 1930. One of my first acts was to install the proper system of files and records for handling the work of this office in a competent manner. The duties of this office have varied and include many activities which many of the sportsmen and members do not fully realize or appreciate at times. It is necessary to do other things than to write letters to the affiliated clubs and other clubs throughout the state. If one will but carefully analyze the tentative program which was drawn up at the last meeting of the directors held at Billings on November 19, one can readily see that if the necessary time, thought, study and energy is given to each one of the aims of this association mentioned in this program that it requires innumerable hours of study, gathering of data, preparation and work. None of this can be classed as needless effort. It is all very essential to the successful operation of this organization which is of some material benefit to the perpetuation of the wild life of Montana.

"Since September 8, I have visited the directors or members of 16 clubs, several towns in the interest of new clubs and appeared before several other groups such as Father and Sons banquets, Boy Scouts, Service clubs, schools, and the Dude Ranchers Association annual meeting. Motion pictures of Montana wild life which are the property of the State Fish and Game Department, have been shown to several groups and schools, numbering several thousand people. These pictures put over a story that cannot be told in words. They help to bring about a better realization of the tremendous amount of work necessary for the propagation of fish and game. They also have much to do with the exercising of better sportsmanship and it seems reasonable to state that thousands of boys who now view these pictures as school students will go into the fields and onto the streams of this state with a greater respect, regard and appreciation of this wild life and be better sportsmen. These pictures are also enjoyed by many who do not fish and hunt. In fact it is the only enjoyment they derive from our wild life and they are certainly deserving of this only pleasure from it.

"This association was organized here in Helena in the fall of 1920. Like all such organizations, it has had its ups and downs so to speak, but we in Montana were very fortunate in having enough real red-blooded sportsmen to stay with the ship at several times when it was apparently doomed. At the present time, it is felt that the uphill work carried on by the sportsmen affiliated with this association during the dark days is now bearing fruit. If we will but realize the manner in which our conservation methods have changed during the past 10 years, surely it can be said that this association was very instrumental in bringing about better methods and conditions. This office fully realizes that the valiant efforts put forth in the past were but a forerunner of the tasks that confront the sportsmen of Montana in the future.

"Conservation problems become more numerous and greater each year and

they must be met each year. The practice of putting off today what can be left until tomorrow cannot be successfully applied to successful conservation. Too many states have done this same thing to their deep regret and at the cost of millions of dollars and with the sportsmen getting but very little if any utilization of the wild life during the many years required in regaining the abundance that was previously theirs. The first years of depletion are not very noticeable but after a certain period the depletion of wild life becomes very rapid. We have but to ask our fellow sportsmen in eastern states for confirmation of these facts. Many will quote the abundance of deer in Pennsylvania, but hasn't it taken about 23 years to get this abundance and what has it cost them? We in Montana can enjoy a good abundance of practically all species of wild life if we will but meet this situation now, not five years from now, but in 1931. This year is undoubtedly a turning point in the abundance of the wild life of Montana. A few cents annually from the sportsmen will practically insure us against such depletions as have occurred in so many other states. Vision is one of the greatest requirements necessary for proper conservation and this office is constantly studying conditions in Montana and experiments carried on over the entire United States and methods nsed.

"It would surprise many of you to know of the number of inquiries asking if there is an actual depletion taking place in Monatna. If any of you will but take the time to study certain facts and figures which are available you can easily satisfy yourselves that there is a rapid depletion taking place. Compare the present number of fish in our streams, game birds and game animals on our plains and in our forests with the abundance of but 10 years ago and also 20 years ago.

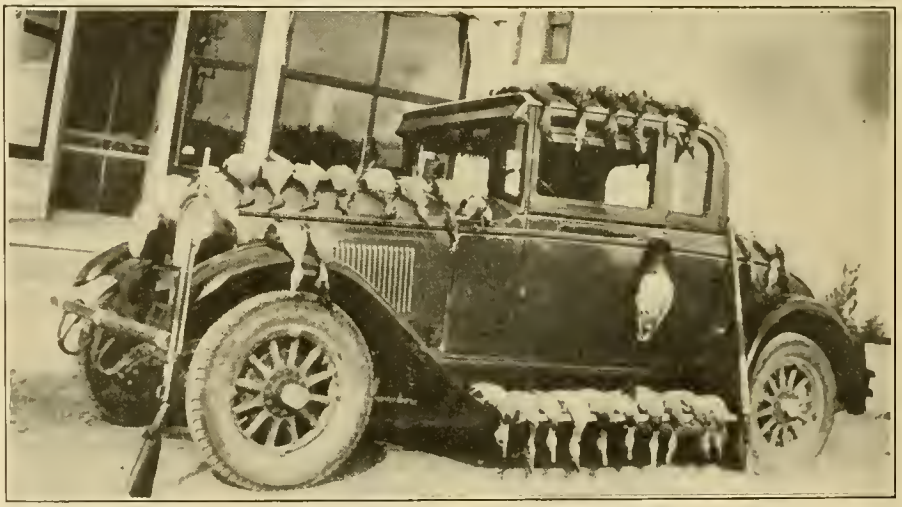
"This office has always assisted in the securing of more refuges and sanctuaries for wild life. During the past three months I have spent much time in making a careful survey of the public domain lands within this state in view of getting suitable areas set aside, if possible, as game preserves and for public shooting grounds. There are many areas in this public domain that are very suitable for antelope and other animals. There is also a possibility that proper waters may be created on some of this land for migratory waterfowl. Each year the task of acquiring public lands will be more difficult. We should this year without any further delay make a very careful survey of the state and designate certain lands that will be necessary for refuges and public shooting grounds 25 and 50 years from now. After this is done, and it is the first necessary step to be taken, we can go about acquiring such lands as soon as possible. I would like to see a committee appointed to start work on this most important issue immediately and by working with the State Fish and Game Commission we would accomplish something that has never been taken care of in time by any other state. As soon as the areas that we are now investigating are found suitable we will immediately notify the sportsmen in that particular community and do everything possible to help acquire such lands.

"Fully realizing that if the sportsmen of Montana are to continue to enjoy the wonderful sport of shooting migratory waterfowl, that it is very necessary that suitable waters be created and proper food planted in them, this office is constantly in search of locations where such waters may be created. A very careful survey of the entire state should also be made regarding such areas.

"I have heard a great deal said about the Chinese pheasants being such a great menace to the farmers. I have read reports from other states which have conducted experiments over a 12 months' period to ascertain if they are such a menace. The reports from other states have proven that they are not. I recently talked to a taxidermist who had carefully examined the crops of 23 pheasants and had found a total of four grains of wheat. He also stated that the crops were filled principally with weed seeds. If these wonderful birds are not guilty of everything said about them and do eat the same foods in Montana as they do in other states, I believe that the farmers would feel more kindly toward them and that they would be more plentiful. It must be remembered that the Chinese pheasants are offering all of the upland bird shooting to be found in most territories. It is very evident that such experiments should be carried on in Montana over a period of 12 months so that we may have facts and figures and not have them condemned only by hearsay. The State Fish and Game Commission could have some of its wardens trap or kill a few birds each month in different localities. The crops or contents of same could be sent to some specified place, possibly the college at Bozeman, and a very thorough analysis made of the contents and records kept. At the end of 12 months we would have obtained facts and figures that could not be disputed.

"Providing cover and feeding areas for our game birds is an important matter. I have given considerable time and study in trying to find the best method of securing suitable small and large tracts that can be acquired for this purpose. Think of the thousands of acres of wonderful natural cover along fences, irrigation ditches, and railroad right of ways that might be utilized for this purpose. Of course we could not expect the railroads not to cut the grass along their right of ways in order to eliminate fire hazards but when this work is done under the supervision of the section foreman much valuable bird seed could be saved along with many nests and young birds. Just another one of the thousand and one things that we should be thinking about and acting upon. A well-laid plan and co-operation will make these things possible. Co-operation is more necessary for the accomplishments of the sportsmen than consolidation has been

Duck Food Planting Brings Visible Results



SHORTLY before the season closed on migratory water fowl, a party of Grass Range hunters brought in the first limit bag there, as evidence that the planting of duck food throughout Montana and activities in creating artificial lakes by building dams is building up the duck supply in the state. The picture above is submitted by R. B. Vrooman, editor and sportsman of Grass Range. Joe Clancy, Martin Haugen and A. R. Mackenzie brought in the wonderful hunch of ducks from Ford creek. When about to pick one of his ducks, Mr. Haugen discovered that it was banded, the U. S. Biological Survey number being 542,043. He notified the department immediately and by return mail from Washington, D. C., came the information. The duck was a young gadwall and was banded at Comanche Lakes, Yellowstone county, September 2nd, 1927. As far as is known this is the first banded duck ever to be brought into Grass Range.

to commercial enterprises during the past few years.

"This office has started a careful study of our fur-bearing animals which have been neglected to some extent to find out if we cannot recommend some better means of propagation and utilization so that Montana will be one of the leaders in the production of fur-bearing animals, a position which it should hold at this time. It is easily possible for our streams and forests to produce at least $1,000,000 more fur.

"One of our greatest problems is predatory animal control. Duriug the past two months I have sent several letters and considerable data to Senator McNary in attempting to secure an increase in the predatory animal control fund, which would benefit Montana by at least $60,000 for this most important work. I am also workiug with the predatory animal control committee of the Montana Wool Growers Association.

"The use of privately owned property is without a doubt one of the greatest problems confronting the sportsmen of Montana today and for the future. 'No trespass' signs are becoming more numerous each year and in most instances they are the result of the actions of a few unsportsmanlike persons. If something is not done to remedy this situation there can be but one outcome, and if something is not done how will we utilize this abundance of wild life that we hope to build up and preserve for future years. Shall we continue to let the unsportsmanlike few deprive thousands of us and our children and their children of this wonderful, clean, healthful sport? Twenty-one states report that at least one-third of all privately owned property is now posted. Seventeen states advise us that a verbal or written permit must be obtained before it is possible to fish or hunt on privately owned property. Do we want such laws as are now written into the statutes of Michigan? Do we want to hunt under the European system? I hardly think so, but unless we do something about this issue now, not five years from now, we are headed in that direction. There is a possibility that the persons who disregard all of the farmers' rights and property are more guilty of a grave misdemeanor than the persons violating our game laws. We know that every effort is being made to apprehend these game law violators but what has been done to correct this other condition and to apprehend these other violators who are so detrimental to the good sportsmen and our wild life? If this is true, should they he treated differently than they have been treated in the past? If proper methods are pursued for controlling them, I believe that at least one-half of this problem will have been solved. But some of the sportsmen cannot turn their heads when they see some of these things as they have done in the past. These things often make us wonder if we haven't the cart ahead of the horse in our conservation operations and if we aren't giving too much time and thought to less important issues and entirely ueglecting some issues that are by far greater and more important. I would like to see the proper committee appointed which will have the fime and courage to solve this problem and work out a solution and I assure you that if this can be done that our methods will be adopted by practically every state within a very short time.

"I have heard considerable said regarding the size of fish that should be planted and also that there will be an attempt made to secure a law making it necessary to plant only six-inch trout. Do we want such a law when eyed eggs and smaller fish will survive in some of our waters and especially those where it is necessary to take them on packhorses for several miles? Such a law would seem almost like a reflection upon the intelligence of the sportsmen of this state. I think that we should first determine if the State Fish and Game Department has refused to plaut six-inch trout where advisable. In talking over this matter, they informed me that it is their intention to plant six-inch trout whereever advisable and we know that rearing ponds are being built each year.

"At the last annual meeting of this association, it went on record as favoring an increase in our fishing and hunting license fees. Three dollars was the amount decided upon for a general fishing and hunting license. After a careful study of license fees in other states I have found that the license in 30 other states are higher than those in Montana. Many of these states also have very little to offer the sportsmen. The areas and conditions in many of these states are not as vast or difficult in which to carry on the work necessary for conservation and protection. At the present time many are in favor of the split license feature, so that the person who fishes will not be required to pay a higher license or for hunting privileges which he never enjoys. I have also found that many states are using the tagging system for big game. This seems very necessary for the wild life of Montana and will also furnish figures which are necessary to the State Fish and Game Department, as a report must be made to the department of all large game killed. Forty-eight clubs have notified this office that they are in favor of an increase and four have stated that they are opposed. Some of the clubs favoring an increase have mentioned the $3 license, such as was favored at the last annual meetiug. Some are in favor of a split license system with different amounts mentioned. During the past four months I have gotten out several letters and articles to all of the clubs and representatives and many newspaper articles regarding this increase.

"Considerable effort has been put forth to bring about a better feeling between the farmers and the sportsmen and to bring about a better realization of the benefit to the farmers of the killing of predatory animals which is carried on with the help of funds supplied from a part of the fishing and hunting license fees.

"Exhibits such as used by the Department of Agriculture and shown at some of our fairs are in the making and will he used at some of the fairs and other meetings throughout the state.

"Much has been said regarding the grazing of domestic stock in the national forests and game preserves. I thiuk that the best solution for all time to come is the appointing of a committee which can give two or three days' time each year in securing certain data necessary to make a true and unbiased report that will show the facts and figures regarding this situation that has caused so much contention in the past.

"If the sportsmen are to carry on and derive the greatest amount of benefit and the proper results, it can best be done by co-operation and basing all criticism upon facts and not hearsay. We must trust each other, and every group must trust any other organization until such an organization has been found to be acting in a manner detrimental to the preservation of our wild life. We must also take into consideration that other industries have certain privileges and must exist, and in such instances arrive at a happy medium. Surely nothing can be gained by standing around the corner and throwing bricks. It is only natural that

(Please turn to page twenty.)

Butte Angler's Club Achieves Results

William Carpenter

SPORTSMEN of Silver Bow county who are affiliated with the Butte Anglers' club have rolled up their membership past the 2,000 mark and have achieved meritorious results in the work of conserving and protecting wild life of Montana. Much of this work has been completed under the leadership of President William Carpenter. Despite the fact that Butte is built in the mining region made famous by "the richest hill on earth," there is but little hunting and fishing within the county boundaries. Nevertheless, sportsmen of the county have made possible the fish hatchery at Divide, co-operated with the State Fish and Game Department in creating the largest trout rearing ponds in the world at Maiden Rock on the Big Hole river, planted many fingerlings in the famous Madison and aided and co-operated in other similar lines of endeavor. The club has gone on record as unanimously favoring the increased hunting and fishing license fees in order that more adequate funds may be provided for continuing the campaign of conscientious conservation of the wild life heritage of Montana.

Game Research and Game Management

Address of Earl A. Fry of Seattle, of the Game Research Division of E. I. duPont de Nemours Co., at the Montana Sportsmens' Association Annual Meeting at Helena

Earl A. Fry

DOES a business which passes the four million dollar mark a year in the State of Montana warrant the attention of the most careful and advanced business methods in its operations? Let's stop for the moment and find the reason for expressing this question.

During the last year there is shown a sale of 89,008 licenses, resident, non-resident, trapping, fur farm, etc., in the State of Montana. Conservatively estimating that each of these license holders will spend an average of $50 within the year in following their sport or pastime, one would arrive at a figure of $4,450,400. Quite a little business in itself that is distributed among the merchants of the state—and a business which is working 365 days in the year without any investment on the part of the merchant.

The merchant of today has come to realize the necessity of careful analysis of his business that he may continue to make it a success. He seeks the dark corners of his buying and selling, taking advantage of the most approved methods of better taking care of his customer, that he in turn may profit more.

Why, then, should we not apply modern business methods to this business of fish and game?

What I may offer is in no way given as any criticism to either the State Game Commission or this Association but with the idea that perchance there may be a thought or two that upon development might bring that which we are most looking for—more fish and game.

Too few states have realized the importance of this idea of research, with time and money being wasted in fish and game work through lack of knowledge of the adaptability of certain species to the areas in which they are placed.

Among the states which have been the most successful in game restoration are numbered those making a scientific study of the food, cover and proper species of game which will prove best suited to their hills and fields and the food value contained within the waters and proper species of fish which will thrive in their lakes and streams.

What is this idea of game management and research? The encyclopedias do not list the former for it has cropped up in a "Topsy" like method. To describe briefly, it means game and fish can be hunted or caught safely only when the stock on each parcel of land or in the waters is protected against over-killing and provided with cover, food, and some protection from natural enemies.

To select the right kind of management and to apply it skillfully requires biological facts and men who can advise the interested parties how to apply them. The facts must be discovered and the men trained. Game management must be recognized as a distinct profession and developed accordingly.

Our game departments are learning the importance of training their men, yet but limited finances are provided with which to carry on this type of work. There is the real need for a co-ordination of effort among all interested parties to the end that these ideas may be advanced.

An extract from President Hoover's telegram to the seventh annual American Game Conference held in New York early in December of 1930 is of special interest in this respect:

"The protection and propagation of the useful wild life of the country is of much greater importance than is generally realized and deserves the most careful attention. The biological facts should be first ascertained and measures planned in accordance with them and with the equally important facts of human nature. Such measures can provide a program that will not only be of great economic value but will preserve the great human values of sportsmanship and the outdoor life."

How do the sportsmen of Montana fit into this picture? Just what part can they take in this necessary research work?

Before continuing further I wish to commend the Montana State Fish and Game Commission for its vision and realization of this work. The establishing of the game farm was in anticipation of furnishing sport for the future. Its success is outstanding in the nation. Likewise has the commission a vision in supplying hatcheries and rearing ponds for fish culture. Research work has been carried on along fisheries lines in the state that will prove of very great value in successful fishing for years to come. I feel that the Commission realizes the importance and need for research work.

What, then, can the sportsmen do along similar lines?

First of all let us take up the waterfowl problem. It is a known fact that lack of water areas which includes the rest and feeding places has been one of the outstanding elements against continued large migrations. The government, some two years ago, established the means whereby these areas could be permanently established, either through the purchase or otherwise acquisition of the lands. I understand that in this state the survey work done along this line has not proven satisfactory, in the fact that those in charge of the work had apparently selected known waterfowl waters rather than create additional areas that might be rehabitulated. I am of the opinion that the sentiment of the Game Commission in this respect is just.

I believe, however, that an important part of the program of every club in the state would be to select any outstanding area within their locality which might be developed along these lines and in turn call the attention of the Bureau of Biological Survey and the State Game Commission to this fact. If a project has merit and it is called to the attention of the Bureau I see no reason why they will not listen to the will of the sportsmen.

Too many failures on the part of drainage projects are all about us in these western states that one surely

On Rock Creek

THIS picture of Mamma Moose and her baby was snapped with the movie camera by Paul J. Fair, photographer of the State Fish and Game Department, at Medicine Lake on Ross' Fork of Rock Creek while the animals were browsing along their favored marshy spots along the lowlands. This picture, which was taken from a movie reel of the moose, forms part of the group of movies of wild life now being shown in the state for the education of sportsmen as a demonstration of achievements of the State Fish and Game Department.

should be able to propose plenty of material for the government to work upon, rather than use those which are now known waterfowl areas taken care of by the state commission.

Proper environment as far as food, cover and control of predators enters into the successful crop of game birds. We, as sportsmen, may not know the ideal conditions as far as these elements are concerned but we should have an idea of what constitutes a fair percentage of these factors.

Why not establish a food and cover planting program on an area within your immediate district? Facts on certain valuable game bird food plants which likewise furnish cover are known and published in bulletin form by the government. Carried to a successful conclusion you will find it will eliminate the winter grain feeding programs. Certainly we know what constitutes predator control and how to operate that activity.

The farmer, who is a big factor in the rearing of game birds, should be considered and a way shown whereby he might realize some monetary return from his interest in the production of these birds. It has been successfully worked out in other sections of the country whereby the sportsmen's associations have secured eggs and turned them over to the farmers in their locality, either the farmer himself, his wife or his children taking up the raising of these birds and when of a certain age turned over to the state game department, they in turn paying what they might consider a fair price for the farmer's trouble. Give the agriculturist a way in which he may be financially interested in the game and he is sure to change his aversion to the birds on his place as well as the sportsmen who hunts them.

Activity in big game work is perhaps beyond the limits of any game association, although there are certain conditions which can be ascertained by local groups, which in turn should be given over to the game department and the problem, if of any consequence, handled by that organization.

Montana has progressed with its fisheries work to a greater degree than many others, particularly in research work, yet there is work which can be done by the respective sports groups which will prove of value to the future of fish.

Spots may be located which may in some time be established as rearing ponds, as well as the securing of food life, such as the fresh water shrimp and the placing of them within the waters adjacent to your locality. You have the good fortune of having as hatchery superintendent a man versed in all of the important phases of successful fish culture. He will welcome your co-operation, I am sure, and can tell you of many ways in which your organization can assist in this work.

Before I close, I wish to digress for a moment and bring to your attention one very important work which your Fish and Game Commission is now engaged in—that of recording on film the story of your wonderful out of doors. To me it means more than the important educational program for which it was started. The showing of these pictures will be the means of greater advertising of your state to the whole country in one of the most pleasing of manners. Printed matter, letters, or word of mouth cannot start to create the interest of the potential visitor to your state that these living pictures of your great out-doors can. I hope you will agree with me on this statement to the end that this work can go forward on the program outlined by the commission.

I have often thought that, inasmuch as the sportsman pays the bill and only receives that for which he pays and no more, a wonderful program for any state gronp such as yours would be to finance a general survey program, to be carried out by the state agricultural college or university, which, when completed, would give you the foundation with which intelligently to carry on proper game management in Montana. With a program of this kind carried through to completion you would have no trouble in selling your organization, not alone the sportsmen of the state but to the general public as well.

The Duck Hunter

In the damp thick cold of breaking day
He took his gun and slipped away
To a light duck boat at a slimy quay
And stealthily pushed out
To the rice-weed beds where a dripping blind
Through the sifting fog was faint outlined
'Gainst murky trees and reeds entwined.
With cat-tails all about.
A swish, a slop, a cautious call,
A drip, a drop, from the lingering squall
A sodden "boom" and a noiseless fall
From the grieving, shifting sky.
There's whistling, there's quacking, there's shooting,
There's twisting, there's whining, there's losing,
There's wading, there's splashing, more shooting,
When feathery wedges fly.

HOW TO AVOID JAIL

"I have sentenced more than 1,000 men, women and boys to prison," Judge Leon McCord of Montgomery, Ala., a leading conservationist, is quoted as saying, "and I have yet to find one real criminal who was taught in his youth to love the outdoors. Teach the boy to row a boat, to swim, to fish and to hunt, and when he comes to manhood he will be found on the jury and not before it."

State Department Is Planting Ten-Inch Trout

IN keeping with conscientious tests and experiments conducted by the State Fish and Game department, efforts are being made to plant larger game fish and the picture above shows a group of sportsmen of the Upper Musselshell Valley Sportsmen's Association planting 10-inch trout in the Sweet Grass River reared in the Anderson ponds at Emigrant which are operated by the state commission. The truck shown in the picture is one of the speedy vehicles operated by the state which rushes these fish from the hatchery to the upper reaches of streams for liberation. Left to right in the picture are: George Phillipi, former president of the Harlowton club; Barney Brennan of Melville, Mont.; Truck Driver Gunderson, B. L. Dockins and T. W. Hicks, Jr. The Upper Musselshell club, according to Secretary L. R. Daems, believes that better results can be attained by planting larger fish and therefore heartily favors an adjusted license fee in order that adequate funds for feeding and extension work may be provided the State Fish and Game department.

Commission Permit Fishing Through Ice

PORT of fishing for whitefish through holes in the ice in the Missouri river in Broadwater, Cascade, and Lewis and Clark counties has been approved for a limited season subject to order by the Montana State Fish and Game Commission. At the last formal gathering, appeals were made by clubs of sportsmen asking that the action be taken because of economic conditions. Whitefish is classed as a game fish and the taking of trout or other game fish through the ice is forbidden.

The meeting was held at the office of the State Game Warden at Helena, December 18. Those present were: Thomas N. Marlowe, chairman; E. A. Wilson, W. K. Moore and G. T. Boyd, Commissioners; Robert H. Hill, Secretary; K. F. MacDonald, Superintendent of Fisheries; B. F. Gerry, Educational Secretary, and Floyd L. Smith, Editor of MONTANA WILD LIFE.

Chairman Marlowe introduced J. P. Doyle of Lolo, Mont., who has a patent for a fish wheel. The Commission recently gave him assistance in building and testing this wheel. He explained the workings of his wheel, and how it would save thousands of fish in ditches. He quoted prices for the installation. Discussion arose as to the authority of the Commission to install fish wheels or screens in irrigation ditches, and power to protect them. Secretary Hill explained that expenditures for fish wheels would be financially impossible at this time. It was decided that because of lack of funds at this time action be deferred on Mr. Doyle's request to install wheels.

Commissioner Moore reported no further advancement toward building a dam for migratory birds on the lake near Forsyth. He explained that the Forsyth club had paid delinquent taxes on 3,000 or 4,000 acres in this particular area, with a view to securing the land on a tax claim. The owners, hearing of this action, paid all back taxes, repaid the Forsyth clnb, and are now holding the land. Qnestion arose as to whether the Fish and Game Commission has the right to condemn land for public purposes. Secretary Hill was instrncted to get full particulars on the ownership of the land from Mr. Haywood of the Forsyth club; ascertain from the attorney general whether or not this land could be condemned, and proceed with work to build the dam when fnnds are available.

Commissioner Moore advised that there is an area in the suburbs of Billings which he wonld like to see created into a bird preserve, inasmuch as there are many pheasants there. Mr. Hill advised Mr. Moore of the procedure to place the matter creating a preserve before the Commission

Chairman Marlowe called upon Kenneth F. MacDonald for his report of state fisheries work. He reported on loch leven trout eggs secured from the U. S. Bureau of Fisheries at the Madison station. The Commission had requested 5,000,000 eggs from the bureau, and has received 3,600,000. An additional 200,000 will be received before the distribution is completed. He reported that 2,000,000 of these eggs have been sold to J. W. Kinney at Seattle for $1 per thousand. The remainder of these eggs will be planted in the Missouri.

In connection with the securing of loch leven eggs from the bureau, Mr. MacDonald advised that he had conferred with Fred J. Foster, District Supervisor of the Bureau of Fisheries, and that Mr. Foster had expressed a desire to meet with the Commission and discuss thoroughly matters which concern the bureau and the Commission. Mr. Foster, as representative of the U. S. Bureau of Fisheries, was invited to attend the next meeting of the Commission for the purpose of having a definite understanding with the bureau regarding future activities in Montana.

There was general discussion relative to a possible amendment by the legislature of Section 3712 of the Revised Codes; the suggested establishment of a department spawn-taking station on the Upper Madison; and the question of using department trucks for distribution of loch leven from the Bureau of Fisheries station.

Mr. MacDonald advised that Mr. Drew of Troy is taking brook trout eggs for this department on a fifty-fifty basis, and the department's share will be over 1,000,000. He advised that about 500,000 of these will be planted in streams which already contain brook trout, but in no other waters. He was authorized to dispose of the eggs as he sees fit.

Mr. Marlowe suggested that Mr. MacDonald get in touch with the Ohio Department of Fish and Game, as they had expressed a desire to secure loch leven, and possibly brook trout eggs, in exchange for Rocky Mountain whitefish eggs, the exchange to be made on a weight basis.

Mr. MacDonald advised that the Game Commission at Newport, Wash., had written him for rainbow trout eggs from Lake Mary Ronan.

Mr. MacDonald read a letter from Eli Melton, foreman of the Station Creek hatchery, asking for a year's leave of absence, beginning December 1. Mr. MacDonald advised he had granted Mr. Melton this leave, and had hired Mr. Young at $50 per month to act as watchman.

Mr. MacDonald advised that he would comply with the conditions of the easement for the Station Creek hatchery site, and not discontinue hatchery operations there altogether.

Mr. MacDonald explained that the Great Falls hatchery had always been supplied water by an electric motor, which was not a satisfactory system inasmuch as the power is cut at times. He had therefore purchased a gas engine at $100 to furnish a dual system for supplying water to this hatchery. He was authorized to install the proper engine.

Mr. MacDonald advised that the residence at the new Libby hatchery site is almost completed, and that, at a cost of approximately $1,500, the residence can be completed and the hatchery building completed sufficiently so that work can be resumed at the hatchery. The pipe line has been purchased, and Elmer Phillips, foreman of the hatchery, is superintending all the construction. He was authorized to have the Libby hatchery completed.

Mr. Hill presented a letter from the Libby Rod and Gun Club, with their

Senor Yip Yap

Old Man Coyote, or Senor Yip Yap, foe of cattle, sheep and game, gets somewhat hungry with the ground covered with snow and is shown here with ears pricked up listening and waiting for a field mouse. His tribe is fast decreasing because of the activities of the State Fish and Game Department and its predatory animal drives.

check for $300, for the purchase of the old Libby hatchery and residence. The check was accepted.

Mr. MacDonald advised that he has a bill of $1,400 from B. M. Crenshaw, contractor, for moving the buildings from the old to the new Emigrant hatchery site. He also received a bid from a plasterer for work in pointing up the foundations, repairing the plaster and chimneys in these buildings, for $115. He was authorized to accept the bid to finish work at the Emigrant hatchery.

Mr. MacDonald offered to cooperate with the Commission, in this time of low funds, by cutting down the hatchery force to the minimum, and the entire matter with reference to adjustment of salaries of men employed in the fisheries department, and also what employes should be laid off, was left to the discretion of Mr. MacDonald.

Mr. Hill asked the Commission if, in connection with their order at the last meeting that all legal papers be recorded in the several counties, they desired to have easements to rearing pond sites and hatchery sites recorded. It was decided to have all perpetual easements recorded.

Mr. Hill advised that he had laid off Charles Hutton on December 10, in view of the finances of the department, and the action was ratified.

Mr. Hill read a resolution from the State Izaak Walton League chapter, which is composed of the Great Falls, Belt and Fort Benton chapters, against policies of the department.

Mr. Marlowe reported on the American Game Conference meeting which he had attended in New York, at the behest of and as representative of the State Fish and Game Commission. He also reported attending the meeting of the Advisory Board on Migratory Birds, of which he has been a member for several years. He reported the action taken at the meeting of the game conference, and reported that Montana's wild life conditions are excellent when compared with conditions in other states. He also reported that he found, when meeting there with the advisory board, that Montana had done unusual and important work in building dams for migratory birds.

Mr. Hill read a petition from citizens of the Lima district, asking the creation of a bird preserve in their district. He also advised that on November 1 he held a hearing in Dillon relative to the creation of this preserve, that no protest had been made, and that the Beaverhead Sportsmen's Association expressed themselves in favor of this preserve, which will protect diminishing upland game birds. The Commission created the bird refuge, to be known as the "Lima Bird Refuge," in the following described territory: "The land from Dry Gulch on the west, the Oregon Short Line tracks on the north, and the Idaho state line on the south and east, in Beaverhead county, Montana," and the above described territory, known as the Lima Bird Refuge, shall be governed as a bird refuge of the State of Montana, wherein it shall be unlawful to fire a gun for the purpose of killing or attempting to kill any birds. The Secretary shall be instructed immediately to post and publish the proper notices of this order."

Mr. Hill presented a petition from residents of Liberty county, asking the Commission to suspend the regular closed season on the Marias River in Liberty county, and to declare a 15-day open season on Hungarian partridges in Liberty county. It was denied.

Mr. Hill read a petition from citizens of White Water, Montana, asking that Pea Lake, in Phillips county, be closed to fishing for one year, inasmuch as the lake has recently been planted with sunfish and bass. The lake was closed to fishing for two years, effective January 1, 1931.

Floyd L. Smith gave a report of work as publicity director for the department, and in editing the Biennial Report for 1929-1930, which was completed and ready to place on the desks of members of the legislature the first day of the session.

The following resolution was passed: "Be it resolved, that the Montana State Fish and Game Commission does request of the State Treasurer, the State Board of Examiners, and the Montana Livestock Commission, that there be created in the office of the State Treasurer a system of accounting, in addition to that now used relative to the state bounty fund, wherein and whereby the amount paid as bounties for the killing of predatory animals shall be segregated from the bounty fund account, so that a record of all such payments may be preserved in the State Treasurer's office, as well as in the office, or offices, from which or by which payments are made."

Mr. Hill read a request from Frank Kitchen of the Fish Lake hatcheries, at Stryker, Mont., asking the Commission to close to fishing Fish Lake during the spawn-taking season. In view of the fact that the spawning season is ended, no action was taken.

A letter from Deputy Warden Kohls at Ennis asking the Commission to close to fishing Spring Creek, in view of the fact that the Bureau of Fisheries has placed traps at the mouth of this creek, was read. No action was taken because the spawning season is ended.

Mr. Hill read a letter from Archie O'Claire, deputy game warden, written October 1, suggesting that the Commission reopen Lake o' the Woods to fishing, inasmuch as the lake is extremely shallow and will freeze, thereby killing all the fish. In view of the fact that the season is late and the lake is frozen, no action was taken.

At the last meeting of the Commission, at the request of the Reclamation Service and Commissioner Boyd, Beaver Creek, in the Sun River country, Lewis and Clark county, was closed to fishing. Since the last meeting the Forest Service at Augusta and John F. Arps at Augusta had recommended that the upper part of Beaver Creek be reopened. Commissioner Boyd made a similar recommendation. The former order of the Commission closing Beaver Creek in its entirety was rescinded, and that portion of Beaver Creek, a tributary to the Sun River, in Lewis and Clark county, from the Middle Fork of Beaver Creek, which is 1¼ miles above the old White millsite, to the mouth of Beaver Creek, was closed to fishing until further order of the Commission— the remainder of Beaver Creek, not above described, to be open to fishing during the regular open season.

The question as to whether the Bureau of Biological Survey intended creating a federal refuge at Medicine Lake was again discussed.

Mr. Hill read a letter from R. L. Harris, president of the Custer Rod and Gun Club, at Miles City, suggesting that their club would like to recommend to the state legislature the discontinuance of the Powder River Game Preserve, created under Section 3767 of the Revised Codes, and the creation of three smaller closed areas, or preserves, by and under the jurisdiction of the Fish and Game Commission. They asked the opinion of the Commission in this matter. As conditions are at the present time, the Powder River preserve is too large for efficient patrol, and there are many violations within the preserve. If smaller preserves were created, they contended that they could be more adequately protected with the assistance of the Forest Service. They also recommended an

On Top o' the World

The Montana fish eagle or osprey builds its nest on pinnacles beyond the reach of natural enemies, and, like its big brother, the Bald Headed Eagle, rears its young where they are safe from depredations. The unusual picture was taken by W. M. Rush just as the osprey had prepared to alight.

increase in license fees, and favor a plan to give the Commission power to regulate the deer season. Secretary Hill was instructed to write the Custer Rod and Gun Club that the Commission approves action and thanks them for assistance in favoring an increase in license fees.

Mr. Hill presented a letter from Clinton W. Rowley, secretary of the Western Association of State Game and Fish Commissioners, advising the Commission that at their annual meeting held at Santa Fe, a resolution was made to increase the annual dues in the association from $25 to $100 per year. Mr. Hill also presented a bill of $22 for the printing of Montana's share of the 1929 proceedings, which bill has just been received. The matter was laid on the table.

Mr. Hill read a letter from Attorney Klapka of Fort Dodge, Iowa, representing Frank Hellman, who owns property in the Fox Lake territory. Mr. Klapka stated that it was his understanding that the dam built at Fox Lake would cause water to overflow on his client's property. In this connection, Mr. Hill advised that he had made an offer to one of the property holders upon whose property a portion of the dike was constructed of $100 for the right-of-way on his land. This offer has been neither accepted nor rejected. Mr. Hill stated that a similar offer was made to other property holders. The action of the Secretary, with reference to the payment for the right-of-way, or easement, for the construction of a dike at Fox Lake, was ratified, and it was agreed if the parties to whom this proposal has been made should accept it, that he be authorized to pay their claims.

Mr. Hill read correspondence from Lloyd Nogler of Stevensville offering to kill mountain lions for the department if he should receive a bounty of $50. This matter was tabled.

Mr. Hill read a request from George Miles of Hamilton for the return of his .30-.30 Winchester rifle, which Ernest Greenup had borrowed and which was confiscated from Mr. Greenup in a game law violation case. The request was denied.

Mr. Covey of Salt Lake City, whose gun, motor and boat had been confiscated from three young men on Hebgen Lake, requested information as to the disposal of his property. It was decided to sell the gun at the next auction and to retain the boat and motor.

Mr. Hill read a request from Miller & Miller, Livingston attorneys, agents for E. L. Estes of Park county, for the return of his rifle, which was confiscated. Mr. Estes' fine was suspended. The request was denied.

Mr. Hill read a letter from C. S. Webb, forest supervisor at Libby, asking whether the Commission desired the Forest Service to cancel the permit for the old Libby hatchery site. Inasmuch as all the work is not yet finished in moving the hatchery, no action was taken.

Mr. Hill read a letter from Deputy Cosner at Malta, suggesting that if the Commission would cooperate with the farmers in that district in building a dam in Lake Bowdoin, it could serve better as a bird refuge. No action was taken.

Mr. Hill reported that he had written Deputy Warden Meany to make an examination of the old dam in the Thompson River, built there many years ago by the Peabody-Houteling Company of Chicago, inasmuch as a complaint had been received by Chairman Marlowe to the effect that the dam was an obstruction to the free run of fish. Mr. Meany advised that although the dam was there, it caused a condition which made an excellent rearing pond and the Thompson Falls Rod and Gun Club had voted against its removal.

A request was read from the Great Falls chapter of the Izaak Walton League for $300 to match with money expended by the league for rearing ponds constructed in the Great Falls vicinity. Mr. Boyd reported that he does not know the location of the ponds and no details were presented in the letter to the Commission requesting financial aid. Mr. Boyd advised that he and Mr. Schofield had inspected a rearing pond site in the Great Falls district, which the league had proposed building, but they had not recommended the building of this pond inasmuch as it would be necessary for a man to stay there to feed the fish. The motion provided that: "Before the Fish and Game Commission would feel inclined to appropriate $300 from the fish and game fund, we feel that we should be consulted before the construction work is started on these ponds and the department should have some jurisdiction as to where these ponds should be constructed; and that the league be advised that the present financial conditions of the fish and game fund are such that we need more revenue to carry on work of this kind, and would appreciate the Great Falls chapter of the Izaak Walton League giving assistance in securing additional revenue."

The petitions from residents of Cascade county and Lewis and Clark county, asking the Commission to permit fishing through the ice for whitefish in the Missouri River in these two counties, were approved. At the last meeting an order was made permitting fishing through the ice for whitefish in the Missouri River in Broadwater county.

Chairman Marlowe read a petition from the Bynum Rod and Gun Club, asking that Blackleaf Creek and tributaries in Teton county be closed to fishing from the public road bridge at Townsend Lane, west to the foothills, for two years, and it was approved.

Mr. Marlowe read a letter from the Alberton Rod and Gun Club, asking the Fish and Game Commission to open the Fish Creek country, in Mineral county, to hunting. The petition was laid on the table. The chairman was authorized to write the secretary of the club relative to this matter.

The Alberton Rod and Gun Club also asked that Patty Creek, in Mineral county, be closed to fishing for two

"My Sweetheart Was a Sailor"

THIS sorrowful barnyard biddy has been double crossed. When she finished her hatching chores at the state game farm at Warm Springs she found that instead of a flock of fluffy chicks, she possessed a crew of ugly ducklings, that later grew up into green headed mallards. There's a Frankie and Johnnie romance in the background, a sort of refrain similar to: "He was my man but he done me wrong." Then again there's the story of the traveling man.

years and it was approved until further action.

Mr. Marlowe read a letter from Mrs. Alex Ashley, asking that her husband, who had been in jail for six months and was fined $500 for committing a game law violation, be given his freedom. She said he is unable to pay his fine and will therefore be required to spend 14 months in jail. He has a large family dependent upon him, in need of his support. The Secretary was instructed to write a letter to Lloyd I. Wallace, Lake county attorney.

B. F. Gerry, Departmental Educational Secretary, made a report of work during his three months' employment, writing to sportsmen's clubs, showing motion pictures, securing new memberships for the Montana Sportsmen's Association, attending civic service club meetings and campaigning for an increase in license fees.

GIANT CONDOR ATTACKS MAN

A giant condor, measuring ten feet from wing to wing tip and four feet long, was killed in the cemetery at Truckee, Calif., by E. H. Stein, caretaker of the cemetery, when the large vulture attacked him. Stein was startled by a whirring sound like the motor of an airplane and looked up just in time to see the condor coming toward him through the air at a terrific speed.

With a hand rake, he warded off the first attack of the bird, but it continued the attack and Stein shot it with a revolver. This is the second condor to be seen in that vicinity in a year. One was seen at Lake Tahoe last summer.

The condor is one of the largest birds of flight and is rapidly being exterminated, as it is easy to catch and kill, especially after it has gorged with food. It is seldom that it attacks humans, but often attacks calves and sheep.

BLAME IT ON THE DUCKS

Sam Johnson, a colored potato grower of the Snake river country, came into the country store and asked for credit.

"Why, Sam," said the proprietor, "haven't you just sold your potatoes?"

"Yassuh," said Sam, "but de ducks got all of it."

"The ducks got all of it?"

"Yassuh, Ah shipped down to Ogden and dey deducks foh freight, deducks foh hauling, deducks foh storage, deducks foh insurance, and deducks foh commission. De ducks jes' nachully et up all dem potaters."

RABBIT EAR COUNTER

Persons of an inventive turn of mind should direct their efforts toward rabbit-ear counting machines and then call on Miss Lena Brand, deputy county auditor at Red Bluffs, Calif. She'd be interested. Recently two men called at her office with 582 pairs of rabbits' ears and they had to be counted before a county bounty of 8 cents per pair was paid.

Sperry Slips the Razz to the Razzberry Club

MEMBERS of the well known Razzberry Club of Helena, whose membership is confined exclusively to wielders of rod and gun especially qualified to use vitriolic language, spread sulphur and villify their best friends, are flabbergasted. Lyman Sperry, one of the chief razzers, has passed the razz to the club and the serenity of the situation has become somewhat gummed.

The Mighty Hunter

At each meeting of the chief razzers, among whom might be mentioned Jack Higgins, Jim Slattery, George Macartney, Shirley Garrity, Wilbur Hartwig, Lester Loble, Fink Fischl, George Barrett, Mique McLaughlin, M. D. Chatfield, Bill Redd, Phil Chevallier, Mose Marks, Jerry Sullivan, Rusty McDonald, Ole Evans, Pete Peterson, Buford Miles, Johnny McIntosh, Charley Hartwig, Sad Eye Angle, Ward Crosby, George Davis, Mussolini Morelli, and others of eqnal civic prominence, rules of the exclusive organization provide that he who speaks a kind word regarding any other member shall be ostracized. Hence the sulphur.

Shortly after the opening of the deer season Lyman Sperry was selected as the target. His well known ability with the rifle had caused the green god, Jealousy, to cause flames of envy to burn deep into the hearts of associates. For days and weeks he was twitted. He was razzed regarding his marksmanship. He was told that he couldn't hit the floor with his hat, let alone plunking a bullseye at 50 yards. He was henpecked and abused, criticised and mauled around until his perennial good nature could stand it no longer.

Hence, with a quorum present, Sperry announced that he would then and there hie himself to the tall timber and show up a few persons whose names he declined to mention.

His dander was up but his pestiferous razzers assured him that every deer would be safe in the woods when he a-hunting went. They warned him to shoot only at objects wearing red jackets, explaining that the purpose of wearing scarlet was to enable hunters to see the object better. They warned him against sitting down in the snow, lest he contract housemaid's knee, hangnails, or dandruff. They fortified him with advice regarding waiting until he saw the whites of the eyes before firing and then tapered off with mellow knowledge of the best means of cooking canned pork and beans.

Then Lyman Sperry took to the woods. He was determined to flout the foolishness that had been heaped upon him. His breast rankled with accusations and reflections upon his marksmanship. Each succeeding day found him tramping the hills on the trail of buck deer. Each day he toiled while the heart within him bled. Day after day he hunted in order that he might sock some member of the Razzberry Club with the hind hock of a blacktail.

And after many days, Sperry returned with the goods.

While the car ate up the miles on the way back home, Sperry chuckled with pent-up glee. He visualized the beclouded faces of the razzers. He prided himself on his foresight and cunning. He intended to see to it that the razzers received none of the venison. He decided that he would permit them to eat no roast swimming in brown gravy at his expense, but determined that he would show them only the picture of the big buck deer and himself.

In due time the picture was displayed. It is published with this article—horse, buck and Lyman Sperry. They're ready to shove off from camp to town. The hunter with his chest expanded and rifle flung askew at a careless angle is none other than Lyman Sperry. After the picture was taken, the farmer who killed and loaned him the deer, took the carcass off his plow horse and hung it back in the shed. Lyman brought back the picture.

BIG WATCH SAVES HIM

Because Guy Calvin, 38, of Loomis, Calif., took a big "pancake" $1 watch on a hunting trip, he has a fighting chance for his life. Shot in underbrush by his companion, Calvin received a charge of buckshot in his chest, the worst of the charge, however, burying itself in the big watch.

RELIEF FOR TRAPPERS

To relieve the economic plight of trappers Alaskan game regulations have been amended to permit taking of 10 beaver per trapper in certain sections.

Montana Fish and Game Commission

G. T. BOYD, Great Falls..*Commissioner*
JOS. L. KELLY, Anaconda..*Commissioner*
W. K. MOORE, Billings....*Commissioner*
E. A. WILSON, Livingston..*Commissioner*

THOMAS N. MARLOWE, Missoula, *Chairman*
ROBERT H. HILL, Helena, *State Fish and Game Warden, Secretary*

MONTANA WILD LIFE

The Official Publication of the State
Fish and Game Department.
Published Monthly at Helena, Montana.

FLOYD L. SMITH, Editor

Subscription Rate $1 per Year—15 Cents per Copy
Advertising Rates on Application

Copy for advertisements subject to approval of State Commission and must be in the hands of the editor at the State Capitol building, Helena, on the 15th of the month preceding publication date.

VOL. III **FEBRUARY, 1931** **NO. 9**

FORGET THE WEEPING AND WAILING

WINDOWS and advertising displays in many cities at the present time announce price reductions or benefit performances "to assist the unemployment situation" or "to do our part in aiding the business depression" and suchlike. Statements of this nature do not help conditions but actually hinder the upward trend of progress of the business curve which has so clearly started. There's not the slightest use in attempting to conceal the fact that conditions now are by no means as bright as a year ago. But they are unquestionably improving. Emphasis on the gloomy side only serves to further stimulate the tendency of the American public to weep on its owu shoulder whenever the opportunity presents itself. Montana today, despite industrial flurries, is the best state in the union, and will continue to retain that rank. With the majority of these calamity howlers, it's largely "in the head."

A little more than a year ago the United States was the richest and most prosperous nation in the world and we cheered wildly about the fact. Today we are still the richest and most prosperous nation—and spirits generally are lower than a submarine in the Dead Sea.

During this year of "terrible depression" we, as a nation, have spent $325,000,000 on miniature golf courses. We have broken all records for savings deposits. One New York bank has in its savings accounts enough money to purchase the total annual sales of Macy's, Marshall Fields' and J. L. Hudson's, the three largest stores in the nation, and still have $100,000,000 to expend elsewhere. Last fall we saw reports of many quarter million "gates" at football games every Saturday. We are consuming more gasoline, buying more electrical equipment such as refrigerators, washing machines and radios than ever before. Mr. American has more leisure time on his hands than ever before—more time to fish and hunt, more time to get out into the open with rod and gun and more time to enjoy the greatness of the out of doors. Yet as a nation, we are weeping salty tears, telling ourselves what a jam we're in and how tough the sledding is going to be. If this torrent of tears continues we may be in just such a jam as the gloomy goofs would have us believe. The business is there if the optimist goes after it. This has been demonstrated by the experience of the half-pint golf courses, the savings banks, and other industries which have rolled merrily along. That's no Pollyanna attitude. It's plain common sense. Why emphasize depression. Why broadcast and overstress unemployment. Let's forget the crying towels and start fighting like all get-out for the business that's waiting if sufficient smile and spine is developed to accept it.

BIRDS SEEK RAILROAD TRACKS FOR HOME SITES

"DOWN by the railroad tracks" is coming to be the most fashionable residential section for game birds. In Missouri the railroads, once a symbol of the material development which has almost crowded the wild birds and beasts out of this country, are making amends to the game birds by providing them with food and shelter which they can not find in less "civilized" surroundings.

The plan, which was originated by John H. Ross, commissioner of the Missouri Game and Fish Department, is readily applicable to all other states, according to Seth Gordon, president of the American Game Protective Association, and would assist greatly in increasing the nation's game supply.

At Mr. Ross' request, employees on the rights-of-way of several railroads operating in Missouri have refrained from cutting patches of sumach and other plants which furnish excellent food and shelter for the birds. These sections are now providing food and shelter unavailable elsewhere, and are enabling thousands of birds which would otherwise perish to survive the winter and breed next spring.

Railroads throughout the country could assist greatly in conserving the game supply in their territory, according to Mr. Gordon, by co-operating in such a program.

While the railroads naturally wish to clear away weeds which create a fire hazard, Mr. Gordon said, section foremen could easily be instructed to leave patches of sumach, wild clover, buckwheat and corn, to provide food and shelter for wintering birds.

Such patches, he pointed out, would hardly add to the fire hazard, yet would create thousands of acres of ideal game refuges.

In the spring, the section foremen should also be asked to use care in cutting the weeds to avoid destroying the nests and small birds.

Oh! Lord! Grant me to catch
A fish so big that even I,
In telling of it afterwards
May have no need to tell a lie!

WILD LIFE WORK WORTH BILLION

WILD life conservation is worth $1,000,000,000 a year to this country, according to W. L. McAtee, of the Bureau of Biological Survey, Department of Agriculture. Mr. McAtee, who is in charge of the bureau's division of food habits research, made this estimate on the basis of the following items:

Meat and fur production, about $150,000,000; destruction of harmful insects by birds, $350,000,000; production of fish, $15,000,000; hunters' expenditures, $160,000,000; hunters' license fees, more than $9,000,000; and a share of the general tourist expenditures credited to the drawing power of wild life, $252,000,000.

"At least $1,000,000 was spent by visitors to the national forests and national parks in one typical year," said Mr. McAtee, "and probably one-seventh of all such expenditures may be attributed to the drawing power of the wild life in those areas. All this contributes to the material welfare of the people in sections where the parks and forests are located. If all the areas logically available for wild life could be kept producing game, it would easily mean an increase of what may be calculated at about $21,000,000 annually."

Wild life should be given not only living room but the best available care, he declared. He urged that the layman assist in protecting wild life by winter feeding and in supplying home sites wherever possible.

MONTANA WILD LIFE

PENNSYLVANIA DEER

DEER have become so numerous in many parts of Pennsylvania that they are destroying the forests, using up their own natural food and cover for smaller game. Many does are not breeding. Pennsylvania is not getting her crop of healthy fawns, in some sections, game protectors say. This surplus stock of deer came from twenty years of closed season on does. The deer increased but the food did not.

Two years ago the Pennsylvania commission tried to cut down the number of deer by killing does during the open season, and by protecting the bucks for breeders. Sentimentalists assailed the commission but offered no remedy and in places deer perished. They could not live on sentiment.

This year the Pennsylvania commission kept the season open on does and 100,000 special deer licenses were on sale, in addition to regular licenses for bucks. It is hoped that 25,000 does were killed and the balance restored.

The building up of the Pennsylvania deer supply from nothing in 1907 to the present surplus shows what can be done in bringing back wild deer. Deer have been restored in areas no wilder nor larger than some of the areas in southern Ohio. The program of the organized sportsmen in Pennsylvania has restored wild game to areas where game had been exterminated. Had it not been for the sportsmen's efforts and the sportsmen's money, deer in Pennsylvania would now be found mostly in the picture books. No other group would have brought them back. Sportsmen are likewise bringing back wild life to Ohio.

Continued enforcement of the buck law in Montana is making possible an increased deer population, replenishing herds destroyed by constant hunting which has upset the balance of nature. Pennsylvania has an area of 45,126 square miles as against Montana's 146,997 square miles—in fact three Pennsylvanias could be placed in Montana's area with room to spare. Yet Pennsylvania has a population of about 10,000,000 as against Montana's 600,000.

Stolen sweets may be sweeter, but illegally-taken fish in Montana are apt to be rather highly seasoned by the time the judge terminates his ministrations.

FATHERHOOD

THROUGHOUT all time fathers have been the school teachers, priests and warriors. Out in the open they have taught their sons the craft of the woods and the signs in the skies. There is something about the masculine temperament which makes it impatient of walls and boundaries. Free from asphalt, brick and cement the soul of a man finds something in common with the soul of his son. Under a spreading tree, beside a swift-flowing stream or around the camp fire they strip their souls bare and see each other in the primitive aspirations and hopes of sheer manhood. If any man wishes to know his son, let him set out with him to explore the haunts of nature.

This year, as usual, some of the colleges kept their football teams on a strictly amateur basis while other colleges won all the games.

SALMON SWIMS 1,300 MILES IN 44 DAYS

EVIDENCE that certain species of fish travel great distances from their breeding areas is shown by a Pacific salmon. After being marked with a metal tag by the U. S. Bureau of Fisheries in Alaskan waters, the salmon was caught 1,300 miles away 44 days later in a Siberian stream. For more than a decade the U. S. Bureau of Fisheries has been carrying on its marking experiments, using metal tags, each of which bears a serial number. Fishermen who return these tags to the bureau receive from 25 cents to $1, depending on the specie of fish. Marking experiments have shown that regardless of how much salmon may indulge the wanderlust they always return to home waters for the spawning season. Another way of marking is to remove certain fins in such a manner that no confusion with unmarked fish can result.

A BOY SCOUT'S PRAYER

GREAT Scoutmaster of all Good Scouts, we pray that Thou wilt make us trustworthy—for there are those who trust us. Make us loyal—for through loyalty we reach our highest ideals. Teach us to be helpful — for through helpfulness do we forget ourselves.

Make us friendly—for there are so many who need friends.

Train us in courtesy—for courtesy is the carpet on Life's floor.

Make us kind—for the living things of field and world all are Thy creatures.

Insist upon our obedience—for victory comes only to him to obeys.

Make us cheerful—for cheerfulness is the green grass near the pebbles in the road.

Train us in thrift—for thrifty habits brighten our future.

May we be brave—brave in the darkness and brave in the light—but save us from becoming fakirs in bravery.

Help us to be clean—in thought, in speech, and in deed, and may we always remember that our bodies are Thy holy temples.

Above all, O Father, help us to be reverent—not only toward Thee, but reverent toward all things which Thou hast made for our enjoyment. When we are in Thy great outdoors—among the trees, along the streams and on the hillsides, may we ever remember that it was Thou who made the waters to flow, the trees to reach heavenward, and the mountains to endure all ages.

In all these things we ask that Thou wilt help us, and may we never forget the three promises of that oath to which we together are pledged:

On my honor I will do my best:

To do my duty to God and my country and to obey the Scout law.

To help other people at all times.

To keep myself physically strong, mentally awake and morally straight. Amen.

Some one has said that every living thing has a proper place in Nature; if you ask the trout fisherman he would say the mosquito doesn't know its geography.

SPORTSMEN ASK BEAR PROTECTION

GONE is the day when Mr. Bear could growl that "Somebody's been eating my porridge," and send little Miss Goldilocks into shivers. And gone is the day when Mr. Bear, ambling across the mountainside after some honey for his breakfast, was feared as a vicious outlaw to be shot on sight. Nowadays even little Goldilocks knows that the bad bear of the nursery stories is more or less of a bluff, with a ferocious appearance that usually hides nothing more terrifying than a happy-go-lucky disposition, a girlish shyness and a tremendous sweet tooth.

Bruin's bluff, unfortunately, has been almost too good, for it succeeded in getting him such a bad repufation that now it is Mr. Bear, not Goldilocks, who needs protection. Bruin is unmasked as a good-natured old fraud whose vicious-looking mouth is happiest when filled with berries, and whose long sharp claws are mainly used for digging up ants' nests. But his popular reputation has persisted in spite of the fact that the species of bear most common in the United States are frightened by the approach of man, and only rarely attack livestock. This reputation, coupled with open seasons and lack of "bag limits" in many states, has gone far to reduce the bear population.

Truth will out, and proof that Bruin is coming to be recognized as a good citizen is contained in a resolution adopted at a recent meeting of the Western Association of Fish and Game Commissioners at Santa Fe, N. M. This resolution declares the bear to be "a noble sporting animal deserving of protection in all except the comparatively few cases in which he becomes an habitual stock killer," urges "greater protection for the bear," and condemns "its killing by federal predatory animal hunters except as a remedy in extreme cases."

The association also recommended that the government seriously consider setting apart certain parts of the Alaskan peninsula as sanctuaries for the "most magnificent of North American animals, the brown bear of Alaska."

Montana Rears Warm Water Fish

By Dr. J. H. Garberson of Miles City, Director Montana Sportsmen's Association

Dr. J. H. Garberson

ON the ground formerly occupied by historic old Fort Keogh, the site of General Nelson A. Miles' headquarters during the Indian campaigns following the Custer massacre, which is now utilized by the United States Range Livestock Experiment Station, was an old slough, or lake, sometimes called Cheyenne Lake. An old Cheyenne Indian camp ground was once located nearby. Today it is the site of one of the largest warm water pond cultural stations in the nation, where fish are reared for eastern Montana streams. By cooperation between the Montana State Fish and Game Commission and the United States Bureau of Fisheries, a warm water breeding pond was completed, the original dam being finished and the lake first filled with water in 1928. The water came from the irrigation plant of the United States Range Livestock Experiment Station. Although only a few adult fish were transplanted, in the fall of 1928 about 8,000 fingerling bass were removed and planted in the Tongue River. In the fall of 1928, and the spring of 1929, further planting of adult brood stock was made and an extensive program of development was instituted.

When the lake was drained in the fall of 1929, approximately 275,000 fish, including bass, crappies, and sunfish, were distributed. Of these 148,475 were distributed in Montana, and 128,800 were distributed outside of the state by the United States Bureau of Fisheries.

In 1930 to Montana the following were distributed: Bass 120,400, crappies 37,800, sunfish 568,825, catfish 4,500.

The United States Bureau of Fisheries distributed: Bass 70,780, crappies 6,675, sunfish 19,875, yellow perch 150, making a grand total of 317,005 fish distributed in the fall of 1930.

In addition, the following brood stock and potential brood stock are retained in the lake further to increase the output in 1931:

Brood stock on hand: Adult bass 700, adult crappies 100, adult sunfish 425, adult catfish 29, adult yellow perch 102, a total of 1,356.

Yearling stock: Bass 1,858, crappies 625, sunfish 200, catfish fingerlings 944, yellow perch 161, a total of 3,788; or a grand total of 5,144.

An extensive program of development has been carried on, including the erection of buildings and a residence for Deputy Game Warden J. H. Chartrand, former captain of the United States artillery during the World War, who has charge of work at the lake. The erection of a building, housing the tanks in which the fingerling fish are kept after removal from the lake, prior to their distribution throughout the Northwest by the United States Bureau of Fisheries fish cars, the digging of a well, and the erection of a large water tank which assures these little fish of a continuous supply of aerated water while being held.

The garage and tool house were completed with the installation of a large independent pump on the Yellowstone River at Ulmer, Montana, for the purpose of filling the pond after it has been drained in the fall and of maintaining the proper level of the water during the summer months when the evaporation is rapid; also the completion of a drainage ditch from the outlet of the pond. During the fall of 1930 a dam was practically completed to make a new lake adjoining the old one, the new lake to be called Lake Keogh. It covers approximately 35 acres. It is planned that this new lake will be devoted exclusively to the propagation of catfish and perch.

The area of the old lake is 78 acres and this with 35 acres to be enclosed in Lake Keogh will make the largest project of its kind in the United States and one whose output in fingerling warm water fish suitable for distribution to the non-mountainous parts of Montana and of the surrounding Northwestern states should be of far-reaching importance to sportsmen. In past years sportsmen of this immense territory have been deprived of many advantages of hunting and fishing enjoyed by the sportsmen of the more fortunate areas.

A hatchery for the propagation of wall-eyed pike may be an added project and with this addition it would seem that this project, which has been so well worked out by the State Fish and Game Commission will become the means of repopulating the rivers, ponds and lakes of this vast territory with species of finest warm water fishes available.

The construction expense has to the present time amounted to slightly over $30,000, there being some additional expenditures yet to be made. A portion of this money has been furnished by the United States Bureau of Fisheries. Approximately 75 per cent of the fish removed from the lake are to be planted in Montana, the remainder to be utilized in waters outside of the state. The United States Bureau of Fisheries and its officials are cooperating with the state to insure the success of this project.

Taking Trout Eggs

SCIENTISTS who have specialized in fish culture, have improved upon nature in the spawning process. Montana's five spawning stations produce millions of game fish eggs which are artificially taken from the trout and grayling after they enter the traps. The artificial removal of the eggs by stripping does no injury to the fish. The picture above demonstrates the manner in which a trout is stripped. After being grasped by the tail by the left hand of the fish culturist, who wears woolen gloves, the head is placed under his right arm and the stomach of the fish is gently pressed. The eggs are shown squirting out in a stream into a basin. The milt of a male is then spread on the eggs in like manner and the eggs are then rushed to the hatcheries after undergoing careful preparation. There they are hatched and reared for distribution in streams to keep pace with constantly increasing inroads made by added thousands of anglers.

NOT SO DUMB

The boy left the farm and went to the city, where he did well and eventually got in the swim to some extent. A brother stuck to the farm. One day the farm boy got a letter from his city brother, and among other things it said:

"Thursday we autoed out to the country club where we golfed till dark. Then we motored to the beach and Fridayed there."

The farm boy wrote back:

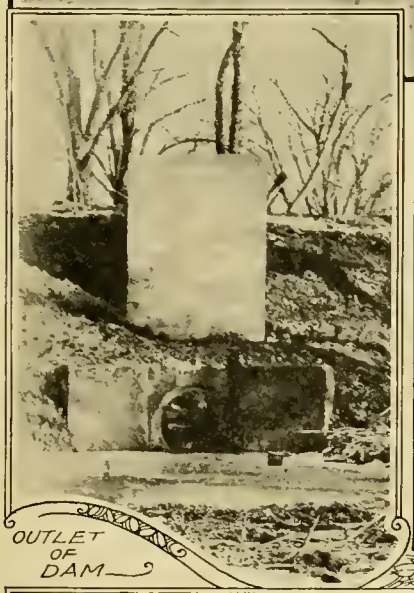
"Yesterday we flivvered to town and baseballed all afternoon. Then we went to Mead's and pokered till morning. Today we muled out to the cornfield and geehawed until sundown. Then we suppered and piped for a while; after which we staircased up to our room and bedsteaded until the clock fived."—Wroe's Writings.

Where the WARM WATER FISHES GROW

LOOKING TOWARD DAM SHOWING ARTESIAN WELL AND PORTION OF BUILDING

LOOKING NORTHWEST DOWN LAKE TOWARD BUILDINGS AND DAM – SHOWING ABUNDANT VEGETATION PROVIDING SHELTER FOR YOUNG FISH

VIEW OF RESIDENCE AND OTHER BUILDINGS

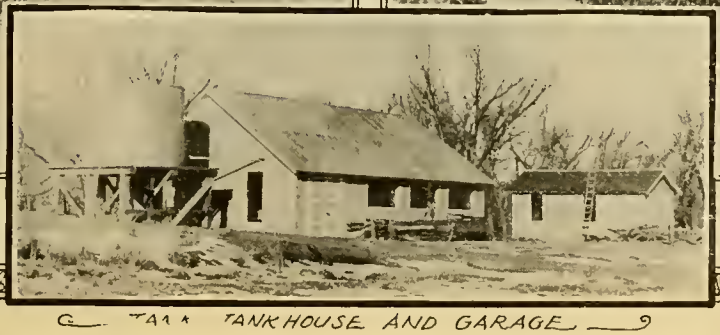


OUTLET OF DAM

LOOKING TOWARD THE DAM

NEW DAM FOR LAKE KEOGH TREES IN LAKE BED NOT YET CLEARED AWAY

OUTLET DITCH FROM POND



TANK HOUSE AND GARAGE

Montana Sportsmen's Association

(Continued from page nine)

this association, the State Fish and Game Commission and other interested organizations have made some mistakes. Will continued criticism and agitation remedy these few petty mistakes or differences in opinion that are less significant? Any real red-blooded sportsman working for better conditions knows that they will not, and that only co-operation and assistance will bring the desired results. The following appears on the envelopes used by one of our rod and gun clubs:

> Your grandfather hunted elk and buffalo until there were none. Your father hunted the antelope, sheep and goats until there were none. You are hunting the deer, upland birds and waterfowl. There still are some. What do you want your son to hunt? Rabbits?

"There is considerable agitation for a five or 10 days' tourist fishing license to sell for $1 or $1.50. This is worth consideration.

"Many are also in favor of putting the bear, one of the greatest game animals in our state, on the protected list.

"A fishing or hunting license at half price for boys between the ages of 16 and 18 is receiving considerable mention.

"I also look for a uniform fee for non-resident licenses in all states to become a national issue in the near future. From one angle it would seem that everything is being done by every state to make fishing, and principally hunting, prohibitive for the non-resident. If the tourist money is welcome and an asset to the entire citizenry of a state many cannot figure out why the big game hunters' business is not cultivated.

"There is a great deal of agitation for lowering the limit of fish from 40 to 20. This issue is deserving of consideration.

"Some of the clubs are becoming inactive. This is a bad condition, coming at a time when activity and co-operation are needed more than at any time in the past, if the sportsmen of Montana are to accomplish the things necessary for the perpetuation of this wild life and their future sport. I have written every club in the state several times in regard to meetings and lending assistance during their membership drives or at any time during the year. When spending a day in a town, I try in every instance to get on the program of any service clubs or groups meeting at noon or other times, to show pictures and talk to the school pupils, Boy Scouts, or other groups, and to have the local club invite the adult public to an evening meeting for the showing of pictures and talks with a business session of the club following. If the citizens of every community knew just what the clubs were trying to do for that community and the state, surely the memberships would be larger in many of the clubs.

"The success of the average club depends largely upon its secretary or directors but the sportsmen should lend every possible assistance in carrying on the activities of the club. If every sportsman would give not more than two days each year, think of the accomplishments that could be obtained. Surely these important matters and activities are worth two days' time of each sportsman and especially in view of the fact that most of the sportsmen spend several days and even weeks of each year in fishing or hunting. It is an issue that is neglected to a great extent but do not forget that if we continue to neglect these issues in the future as we have in the past that within a short time we will be giving dollars where we are now giving cents and spending weeks where we are now spending a day for the perpetuation of this wild life.

"Every club should meet at least three times each year, as we have three distinct seasons, and there are certainly enough activities that can be carried on by any club to justify at least three meetings, and it is beneficial for the directors to meet at least every two months. The directors of some of our more active clubs in the state meet every month and practically every one of these clubs are accomplishing many things that are very beneficial to their members and their communities at large. I would like to see this association offer a cup or prizes to the most active club or clubs each year. You will receive from this office in the near future a list of activities that can be put into your programs and I assure you that I will be very glad to assist any of the clubs in any and all of their activities or problems at any time. I hope that some of the clubs will co-operate more with us in the future than they have in the past. Please remember that such information as we are trying to obtain is very valuable to us in our work and that it takes but a few minutes time to send it to us and also that the giving of such information is of some value to your community in practically every instance.

"It is advantageous to this office that the clubs which intend to affiliate with us this year notify us at an early date so that our work can be arranged well in advance. It is impossible to get over the entire state more than once each year or to make long trips to call on but one or two clubs.

"I want to take this opportunity of thanking the clubs which were affiliated with this association during 1930, and hope that every club in Montana will affiliate and co-operate with us in 1931, and the years to come, so that we may look back five and 10 years from now and feel that the big issues were met in time and the sportsmen in other states will say that the sportsmen of Montana met their problems as true red-blooded sportsmen and have accomplished what we might have accomplished if we had but realized and visualized in time."

The financial report was read as follows:

Receipts

Balance on hand, Sept. 8, 1930	$385.66
Nov. 4, Valier Club dues	15.00
Nov. 4, Libby Club dues	40.00
Total	$440.66

Disbursements

Sept. 19, post office box rent	$ 1.30
Sept.-Oct. traveling expenses	62.54
Oct. 8, stationery	43.65
Nov. 3, postage	1.00
Nov. 4, stationery	1.00
Nov. 5, stationery	31.75
Nov. 5, typewriter	35.00
November travelling expenses	121.12
Dec. 3, filing cabinet	10.75
Dec. 3, telegram	.79
December travelling expenses	51.54
Dec. 1, telegram	.60
Dec. 2, telegram	.70
Nov.-Dec. stenographic help	24.50
	$386.24
Balance on hand, Dec. 31, 1930	$ 54.42

Victim of a Hawk

MONTANA has for years been fighting to save the blue grouse whose habitat is high in the timber, along windswept ridges and slopes where tall conifers pierce the skyline. Because of the strange disappearance of the grouse, some sportsmen have believed them killed by a strange malady. Others believed they have migrated. The picture above shows one big blue boy that met death at the claws of a goshawk. These predatory hawks are enemies of game birds and annually cause a loss of thousands. Fortunately, the blue grouse are coming back and under the protection of the closed season in Montana, last year saw many coveys in territory that formerly was barren.

SOME TUMBLE

We read again that a Bostonian was showing a visiting Briton around. "This is Bunker Hill Monument—where Warren fell, you know."

The visitor surveyed the lofty shaft thoughtfully, and then said: "Nasty fall. Killed him, of course?"

Triumph for Beauty

THE opinion of Montana's aesthetic sense as expressed by visitors from older lands has for generations been peculiar, damning, and probably not a little deserved. Inhabiting a country fortunate in its wild life resources, Americans have been charged with paying more attention to the eagle on the dollar. Surrounded by unsurpassed lakes and streams, we have been accused of noticing only the ripple of light on coins. We have gained the reputation of having an eye for money, and no "eye for beauty." But now it is apparent that the long dormant sense of the beautiful is stirring for a real upheaval. Public opinion in this realm too is beginning to show itself as a most effective weapon.

Changing public opinion has already made itself felt in the rising sentiment against unsightly billboards and roadside shacks which mar beautiful landscapes. The bitterness against companies which have flooded vast areas of timberland without first removing the tree growth is another bit of evidence.

Indications are that companies have brought down upon their heads more than a goodly share of public condemnation because of the skeleton lined shores along their projects. Quite frequently they have been blamed for conditions which our benevolent Uncle Sam has caused through the careless development of irrigation projects throughout the West, many of them at the front door of National Parks.

And now it is good to see the first real step of Uncle Sam toward cleaning up his own front yard, as evidenced in the splendid attitude of Secretary Wilbur concerning irrigation reservoirs in general, and especially Jackson Lake, Wyoming.

Congressman Carmton of Michigan and his associates of the committee in charge of the Interior Department appropriations have succeeded in inducing the House to include an item of $100,000 in the Interior Department appropriation, recently passed by that body, for the coming year to clean up the unsightly mess along the shores of Jackson Lake. Half of the amount will be charged against Teton National Park, and the other half against the irrigation project— a fair division.

At last our government is approaching the problem in a big way. This sets a new national policy. Others will naturally follow, and when Uncle Sam acts, private corporations will fall in line because public good-will pays big dividends.

GIVE AND TAKE

The sportsman knows and heeds the rules; he will not stop to take
A mean advantage of his foe, though victory is at stake.
He'll give his rival every chance to beat him if he can;
He'll battle for the goal he seeks, but battle as a man.

Swiftwater Bill

WHEN Bud Fisher originated the brain characters, Mutt and Jeff, he cleaned up a fortune. When humorists of note brought forth Mr. Dooley, The Katzenjammer Kids, Walt and Skeezix, Tillie the Toiler and similar characters of mythical jesting ability, they struck a responsive chord. Hence, when J. J. Meany, deputy state game warden stationed at Plains, began writing his side-splitting yarns of Swiftwater Bill of Thompson Falls, he likewise made a ten-strike. Readers of MONTANA WILD LIFE who have chortled in glee at the impossible flights of fancy of Swiftwater Bill are calling for more. Unfortunately, the Swiftwater Bill jingle and cartoon which appeared in the biennial report number in January, failed to carry the name of J. J. Meany as the author and cartoonist. He is justly entitled to meritorious credit.

The Kid's Lament

Oh, wot's the use? 'Tain't no fun
T' go swimmin' now in th' ole mill run.
It's full o' snags an' filth an' muck,
An' ole tin cans, an' all such truck.
'Tain't like it was when Dad swam there
With trees all 'roun' an' warm pure air.
The new plant's pourin' all its waste
In the water now—it's just like paste.
Why don't my Dad—an' your Dad, too,
Make these plants do wot they oughter do—
Work up their waste—or ship it out—
So's the swimmin' hole kin be cleaned out?

Killer Goes West

This big brown bear, whose lust for blood had made him a killer, was shot on the north fork of the Flathead river.

Death Toll In Dollars

WITH 1930 apparently breaking all records for the number of hunting accidents, the time seems to be ripe for experienced hunters to do some missionary work with their less experienced brethren, preaching the necessity for greater care with firearms. Experienced hunters, knowing the dangers which lie in every firearm, need no warning to be careful both of their own lives and of the lives of others; but inexperienced hunters, who need that warning, seem to pay no attention to it.

The Michigan Department of Conservation, apparently despairing of convincing the careless sportsman by any other method, is attempting to show the seriousness of the situation by putting it on a dollars and cents basis. Estimating that the average employed citizen is worth $60,000 to the state in which he works, the Department figured that at least $1,500,000 worth of manpower would be destroyed by careless hunters before the end of the hunting season.

This estimate was based on a check of hunting accidents early in the deer season, which showed 15 men killed and 22 injured up to that time. Pennsylvania made a check about the same time and counted 38 fatalities and 193 casualties. In New York the figure was 28 killed and 59 injured.

Simple addition of the figures for these three states—and these figures only counted the accidents up to midseason—show that the toll throughout the United States this year will undoubtedly break all records, and reach a total which calls for sober thought.

The nature of the accidents reported indicate that the great majority of them were caused by new and inexperienced hunters, unfamiliar with the proper methods of handling firearms.

Since more hunters are taking to the woods each year, it seems logical to expect that the number of accidents will continue to increase each year unless the more experienced sportsmen take pains to instruct their juniors in the elements of caution with firearms, and to insist, when in the field, that proper care is used by all members of the party.

"Did I hear you say, Conductor, that the locomotive was at the rear of the train?"

"Yes, ma'am. We've got a locomotive at each end. It takes an extra one to push us over the pass."

"Dear, dear, what shall I do? I'm always sick if I ride with my back to the locomotive."

Small Boy: "Dad, the barometer has fallen."

Father: "Very much?"

Small Boy (guiltily): "About five feet."

Winter Feeding of Montana's Birds

MONTANA'S game and insectivorous birds require feed and shelter during severe weather. While the months of the winter which have passed have brought smiling skies and little zero weather, sportsmen and farmers will do well to remember their duty to feathered foxes of the field. During the fall of 1930 the State Fish and Game Commission made possible the liberation of 6,146 Chinese pheasants in 55 counties within a year of the completion of the state game farm at Warm Springs. Experiments are now being conducted looking toward artificial rearing of Hungarian partridges. These birds must be cared for during bitter periods following liberation.

MONTANA WILD LIFE is indebted to the State Fish and Game Department of Missouri for the accompanying illustration showing the manner of constructing feeding shelters.

Throughout Montana's severest winter seasons sportsmen, Boy Scouts, farmers and all Nature lovers can be of great aid in the feeding of game and wild birds. Each year reveals an increased interest in this commendable work, but helpers in all sections of the state must be enlisted in the conservation program if the game and wild birds are to come through the winters in such physical condition as to allow satisfactory propagation during nesting seasons.

Many fine game and other birds will die during severe winters unless they are provided with feed. And every bird that dies during the winter means several less birds to see and hunt and help the farmer the following summer and fall. Hunters need not expect to find game birds in their communities during the fall season if the brood stock starves during the winter.

The best feeding process in most all parts of the middle west is the use of shocked corn remaining in the field. Shocks can be opened up one by one as necessary, providing a practical self feeder (Figure A).

Grain is most beneficial if placed in pits shoveled down to earth or placed on hard-beaten roads not used by motor cars, or along well packed railroad rights-of-way where trains are fed, beneath vine shelters, brush lean-tos (Figures B and C), and in sheds not used by poultry.

The feeding of shelled grain in loose snow is not advised as it rapidly sinks out of sight and becomes unavailable to the birds. A pit should always be scooped, shoveled or kicked out to the ground except where there is a heavy ice crust.

Shocked corn, mill screenings, haymow chaff, and dry table scraps that are non-freezing provide excellent feed.

It is best to locate where the birds have been frequenting and place the feed there. Game birds should not be fed among domestic poultry as they are easy victims of poultry diseases. Feed the birds in the yard if they come there but keep them away from ground contaminated by chickens.

Feed should be placed in the shelters regularly that the birds will make it a habit to frequent the feeding places. Quail and Hungarian partridge feeding stations should be close together as the birds do not range far. There should be one feeding station on each forty-acre tract. Feeding shelters should not be located in such a manner as to be traps in which the birds would be caught by predatory animals (Figure D). An old barrel with both heads knocked out, suspended from a tree and partially filled with some unthreshed wheat or other grain will provide this vermin-proof feeding station.

Prairie chickens range from one to five miles and in counties where this bird is found, feeding stations should be provided. Corn is suitable feed for these birds. Corn is also suitable for the wild turkey in sections where the mast crop is light.

A satisfactory feeding device can be made by use of cloth or paper sacks, filled with grain and suspended from a tree limb, fence rail or brush pile (Figure E). A small hole must be made in one corner of the sack so that the grain can trickle to the ground or can be picked out by the birds. This feeder can be easily made up by the sportsman before going into the field, only a few minutes' work being necessary to put the feeder in operation.

Chinese and native pheasants will travel far if good feed conditions do

One of Montana's Bottle Fed Babies

MONTANA folks who appreciate the wild life being preserved through conscientious endeavor of sportsmen backing the conservation activities of the State Fish and Game Department, cherish the presence of birds and game animals. During the spring, when fawns are sometimes found in the woods, believed lost by misinformed hunters, they are picked up, carried home and brought up on bottles. In the majority of instances the fawns are not lost and the mother deer is in the near vicinity. They should be left in the woods. Nature will care for them. If handled or petted, the fawn will on many occasions be deserted by the doe, and left to fall prey to predatory animals.

not prevail. Unless they have ample feed they will leave the sections in which they have been liberated. If the sportsmen in sections where these birds have been liberated would have the birds remain in their community they will provide feed. Otherwise some more enterprising community will benefit by the move. Corn and other grain provide the necessary feed for pheasants.

Where cattle or deer are likely to eat up the grain placed out for game birds, the hopper type of shelter serves best to save the grain for the feathered gamesters (Figure F). Such feeding shelters can be built with little expense and effort but can be used from season to season.

Game is not frightened when it approaches this type of shelter and feeder. Vermin has little opportunity to catch game while it is feeding and snows do not cover up the feed. This type of feeder will accommodate any kind of feed necessary for small game and birds in nearly any locality. The flow of the grain can be regulated by the space between the hopper and ground. It is well to place supports at each side of the feeding hopper so that when heavy snows come the flow of grain will not be shut off.

Grit should be provided in cases where the birds are unable to procure this necessary material. Without grit, birds will die with their craws filled.

The city dweller can help with the bird feeding, as many of the insectivorous birds are to be found within the city limits. Shumac and weed seeds are relished by song birds as well as game birds.

Suet, sunflower and other seeds moulded into a ball and encased in a loosely-woven string bag provides an excellent feeding device (Figure C). This bag should be snspended by a string from a tree limb. Because the bag swings, the English sparrow, considered an undesirable, can not hang on and eat while the other birds enjoy this feast.

A decorative insectivorous bird shelter for use near houses is shown in Figure H. A metal disc should be placed around the pole to prevent cats from attacking the feeding birds.

Montana's game and insectivorous birds mean much to the state. They need protection by every man, woman and child if they are to be preserved for posterity.

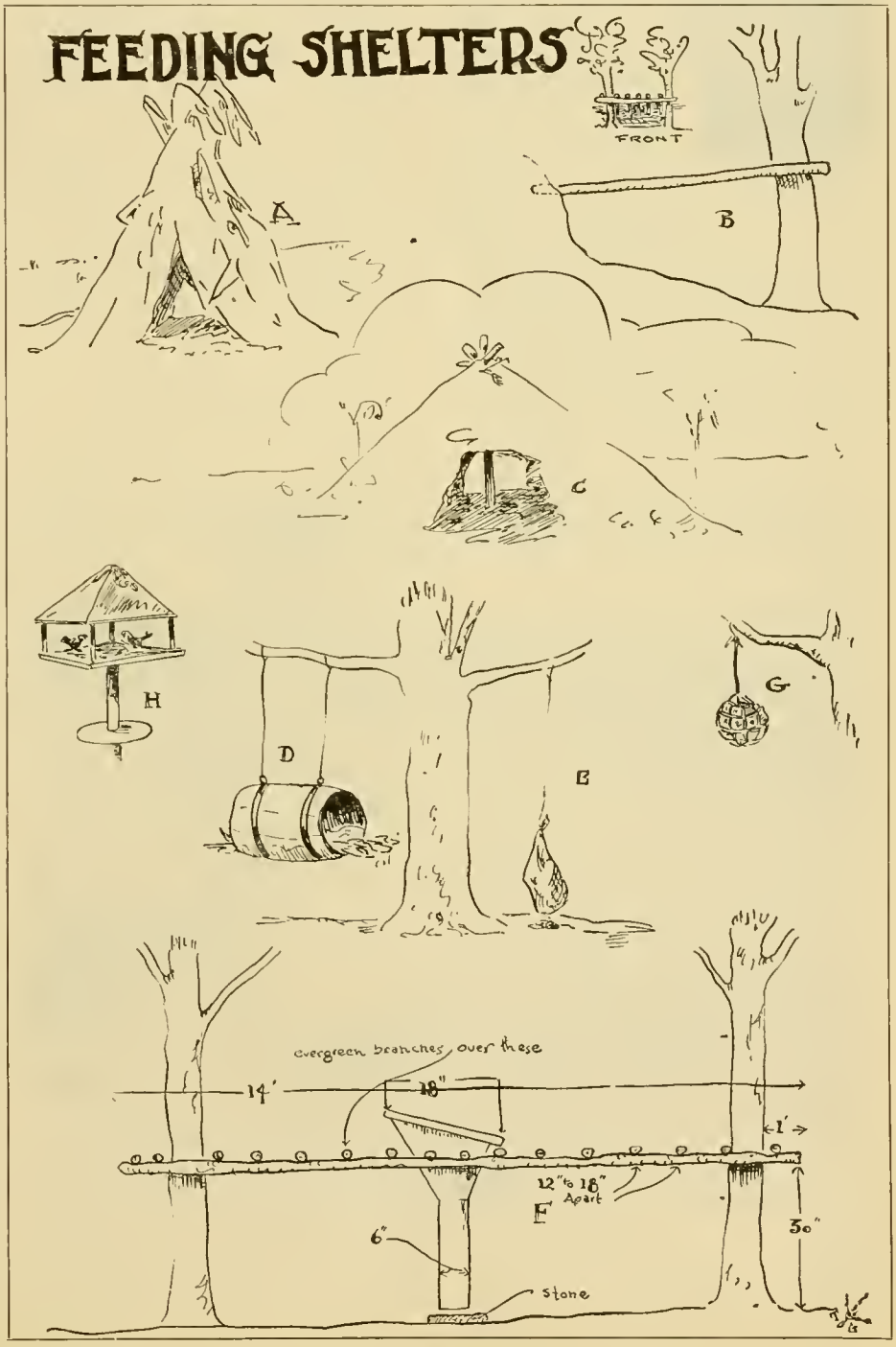
FLOW IN YELLOWSTONE

The amount of water passing over the falls of the Yellowstone River in Yellowstone National Park is said to be a question of universal interest. An average of 44,000,000 gallons per hour is the record for 1927, 1928 and 1929, according to data secured by the office of Roger W. Toll, park superintendent, from the United States Geological Survey. The average of the yearly maximum for the three years was 151,000,000 gallons per hour. The greatest flow has been noted in June and July.

What Causes Birds To Migrate?

CAN scientists cause birds to migrate northward instead of south when the cold weather comes? The question is asked in a report to the National Academy of Sciences by William Rowan of the University of Alberta, and his answer is that certain crows were made to do just that thing.

Dr. Rowan and associates have discovered that neither a warmer climate nor food of the southlands is the trigger that sets birds to flying southward in the fall. The thing that starts them is the shorter days, that is, less light. He found that with diminishing light certain organs of reproduction became partly shriveled. Then the birds fly south. When the days lengthen in springtime these organs grow again and the birds fly north. Dr. Rowan reversed the seasons on the crows by use of artificial light, giving them the increasing long days of spring as the winter came on. He released them and many—though not all—flew north.



Crowded Ranges Deal Death to Game

By WILLIAM M. RUSH, in Charge of Montana Elk Study

W. M. Rush

OVERCROWDED ranges favor the contraction and spread of animal diseases. It has long been known that concentration of game animals tends to produce and develop disease in them but the specific causes have not yet been learned. Facts taken from a study of domestic cattle and sheep show that with our small amount of specific knowledge of the diseases of game animals, a greater margin in the carrying capacity of the game animal ranges should be provided for than in ranges used solely by domestic stock. An increasing demand for the results of the study of these conditions causes me to feel that the following facts will be of especial interest to Montana sportsmen who are readers of MONTANA WILD LIFE.

It seems desirable at this time to record some of the information which has been gained regarding lung worms and other parasites, particularly that dealing with the manner in which these parasites spread from one animal to another.

Identification of the parasites infecting the game animals of this region has been made by Dr. Maurice C. Hall of the Bureau of Animal Industry, who also furnished a "List of References to Original Literature," from which literature most of the following information has been gleaned.

Parasites infecting the game animals of this region and dealt with in this memorandum are:

ANTELOPE—The intestinal worms Ostertagia sp. and Mematodirus antilocaprae: lung worm—Dictyocaulus sp.

DEER—The intestinal worms Nematodirus fillicollis, N. spathiger. Lung worms—Synthetocaulus sp.

ELK—The lung worm, Dictyocaulus hadweni, and a parasite infesting the heart muscle, Sarcocystis miescheriana.

Ostertagia sp. Ref. p. 520 and 523, Special Report, Diseases of Cattle, U. S. D. A. 1923.

"The life history of the encysted stomach worm (O. ostertagia) is not known in detail, but is undoubtedly very much the same as that of the twisted stomach worm (Haemonchus contortus).

"Cattle become infected with these parasites by grazing on pastures on which infected cattle, sheep or goats have grazed and scattered their droppings. The worms in the stomach produce a multitude of eggs of microscopic size which pass out of the body in the feces. In warm weather these eggs hatch in a few hours. If the temperature is below 40 degrees F., they remain dormant, and if below freezing, they soon die. The eggs are also killed by dryness; moistnre, on the other hand, favoring their development. The larvae which hatch from the eggs are microscopic in size and, like the eggs, are at first and until they develop to a certain stage, very susceptible to freezing and drying. In very warm weather the larvae complete their development, so far as they are able to outside the body, in two or three days. In cooler weather the time required for this development is longer, and at temperatures below 70 degrees F., ten days to several weeks may be necessary. The larvae are then ready to be taken into the body. The eggs and early stages of the larvae apparently do not develop if swallowed, and only the completed larval stage seems to be infectious. In this stage the larvae migrate up grass stalks or other objects, showing activity whenever the air is saturated with moisture; that is, driving rains, fogs, and dews. When the air becomes dry and the moisture evaporates from the grass the young worms cease their activity, resuming their migrations when the air again becomes overladen with moisture. Larvae which have developed to the infectious stage, unlike the eggs and early larval stages, are able to survive long periods of freezing and drying. In two weeks to a month after the embryos are swallowed they reach maturity and begin producing eggs."

It is significant that this parasite has been found in this region only in the antelope, which is the only game animal remaining on the low ranges during the summer, or where conditions are favorable for the larvae to reach the infectious stage.

The following is taken from the Journal of Parasitology: Summary of Life History of the Nematodirus filicollis:

"1. The eggs of Nematodirus filicollis when laid contain an embryo with seven or eight cells; they pass out of the infested host with the feces.

"2. Even under favorable conditions development takes place slowly and the embryos are not ready to hatch until 24-28 days have elapsed. In their early stages the embryos are not able to withstand desiccation and are killed if frozen or subjected to high temperatures.

"3. While still within the egg shell the embryo undergoes two ecdyses and when ready to hatch is enclosed in a tightly-fitting sheath formed by the incompletely cast skin of the second moult; the larvae on liberation from the egg shell are therefore in a more advanced condition than those of most other Strongylids (e. g. Naemonchus or Anchylostoma) and are in a stage comparable with that reached by the latter at the end of their period of free existence.

"4. The sheathed larvae are often retained for a long time within the egg shells and both in this position and after hatching can resist complete desiccation for considerable periods (20 months or even longer); when dried they are able to withstand freezing as well as temperatures much above those likely to be met with in the open.

"5. The free larvae will live for a considerable time in water. They possess well developed migratory instincts and climb vertical surfaces, such as grass stems and blades, and the glass walls of the vessels in which they are kept.

"6. The sheaths are cast off by the larvae when these are subjected to tem-

At Lake Ronan

EACH succeeding year sees more women anglers interested in catching their limit of Montana's game fish. Here's a picture of Mrs. Bert Shadle, formerly of Helena, taken after making a proud catch at Lake Ronan where the big fellers abound. Mr. and Mrs. Shadle are now residing at Salt Lake City. The picture is submitted by W. A. Logan, former deputy state auditor of Montana.

peratures approximating the blood temperature of the host; completion of the second moult occasionally also takes place at laboratory temperatures under certain abnormal conditions.

"7. No infection experiments were made on sheep, but other evidence shows that these animals must become infected by swallowing the sheathed larvae, either when free or while still enclosed in the egg shells.

"8. A number of young stages of the parasite were met with in the intestines of sheep, the smallest of these being only little more advanced in structure than the larvae just after ecdysis."

Parasitology—V. 8 (2), Sept. 20, 1915; Boulenger.

Dr. Hall states that in the case of the N. antilocaprac "we presume that the life history is similar to that of N. fillicollis of the sheep which was described by Boulenger in 1915." By reference to paragraphs No. 4 and 5 of the foregoing it will be noted that these parasites are particularly adapted to propagation by grazing animals.

Nematodirus spathiger. Ref. Farmers' Bulletin No. 1330, U. S. D. A., p. 31.

"The eggs produced by the female worm pass out in the feces and an embryo develops in the * * * the larvae hatches under the influence of alternating moistening and drying or of temperature of 75 degrees F. to 90 degrees F. * * * the ensheathed larva then ascends blades of grass under favorable conditions of temperature and moisture, and is taken in by sheep as they feed. These larvae are very resistant to cold and drying, and have also been found to live in water for eleven months. In the intestine of the sheep the larvae develop to adult worms."

Synthetocaulus sp. It appears that the life history of lung worm is similar to that of the sheep lung worm Dictyocaulus filiris.

Dictyocaulus hadweni. The elk lung worm's life history is doubtless similar to that of the sheep lung worm D. Filiria and the following is quoted, somewhat modified, from Cuberlet in the American Vet. Medical Association Journal, Vol. 55, September, 1919:

"Life history summary of D. filiria.

"1. Eggs are extruded into the air passages of the lungs, pass with mucus to alimentary tract, leave animal with the feces.

"2. Embryos under favorable conditions of moisture molt and develop protective sheaths in eight to ten days.

"3. The ensheathed embryos leave the feces or soil when the air becomes saturated with moisture and migrate onto blades of grass or other vegetation where they may be ingested by grazing animals in which, if they are suitable hosts, complete their development.

"4. In the lung the worms cause hemorrhages and congestion, sometimes resulting in pneumonia.

"5. Mode of gaining entrance to body of host is particularly adapted to grazing animals."

Connection with heavy use of range. It will be noted that in the life history of these parasites that after reaching the larval stage it requires a great deal of freezing and dryness to destroy the viability of the larvae and that they have, at this stage, migrated from the ground to the tips of grass and other vegetation. With heavy use of the range, such as occurs on the winter range in this region, conditions are favorable for a large percentage of the larvae to reach their preferred hosts. This no doubt takes place in the early part of the winter or somewhat later in the spring.

Concentration of animals on the range favors the parasites and they tend to build up in numbers to a dangerous point. An interesting point in this connection is the fact that practically all of the deer in the vicinity of Mammoth, when the concentration is heavy year after year, are infected with lung worms.

Experiments with domestic sheep have shown that a few nead in a pasture will rid themselves of the lung worm while a larger number will remain infected year after year.

Sarcocystis. Professor Scott in the Journal of Parasitology, Vol. XVI, No. 3, March, 1930, writes: "In the experience of the writer, lambs raised under crowded conditions become more heavily infected than those that have a wider range whether in pasture, dry lot, or screened cage. Considering all the facts there is scarcely any doubt that food contamination is the usual method by which Sarcosporidia are transmitted to new hosts."

Actinomycosis (lumpy jaw). The disease of lumpy-jaw is caused by an organism known as Actinomyces boris. Dr. Buchanan in his book, "Agricultural and Industrial Bacteriology," p. 368, states: "* * * are very abundant in the soil." The U. S. D. A. Special Report on Diseases of Cattle, p. 440, states: "The ray fungus (Actinomyces) is found in native vegetated grasses, on the awns of barley, the spears of oats, and on other grains."

Bacillus necrophorus is the causative organism of necrotis stomatitis (calf diphtheria) and a number of other diseases. Hutyra and Marck in their Pathology and Therapeutics of Domestic Animals, p. 444, Vol. 1, state: "Natural infection may probably be explained by stating that the bacillus necrophorus, which is very extensively distributed in nature, is, among others, frequently contained in the feces of herbivorous animals, and owing to its anaerobic character remains alive for a long time on the dirty floors of damp stables, in musty food and straw * * *."

Obviously an overcrowded range would tend to be favorable to the contraction and spread of these diseases.

Nobody could be quite so sophisticated as a high school boy feels the first time he taps a cigaret on the back of his hand.

Montana Mountain Sheep at the Feeding Grounds

WHEN winter drifts make life more than a sweet, lilting song for rams, lambs and ewes of Montana's mountain sheep family, many are attracted to the feeding grounds in Glacier National park. Care in the selection of hay and other feed must be taken to prevent the spread of diseases common to domestic sheep and other livestock. The picture was taken at Many Glaciers.

Game Insurance

THE old cook-book, giving a recipe for rabbit pie, started out: "First catch your rabbit—"

Nowadays sportsmen are discovering that a better recipe begins: "First make sure there are rabbits to catch. Then catch your rabbit—"

The same thing goes for other game that is beginning to grow scarce in the local covers. And the best way to make sure that there is game in the covers next year is to pay a small premium this year for "game insurance."

A progressive hardware store in Jackson, Tenn., tried out a new form of "quail insurance" this year, to guarantee their customers an abundant supply of game next season, and its success suggests that other hardware and sporting goods stores throughout the country should try it out in the remaining months of cold weather.

Knowing that the drouth last summer had made quail food scarce throughout the locality, and that adult birds were likely to die of starvation and leave no breeding stock, this firm distributed to each customer a pound of quail food with every box of shells purchased.

The sportsmen, according to Howell Buntin, state game warden, have been glad to co-operate by setting out this quail food on their hunting trips, and prospects now look good for a good carry-over of seed stock, with the result that quail should be abundant next year.

George White, an enthusiastic rabbit hunter of Mullica Hill, N. J., has evolved another sensible plan to guarantee good sport next year. Mr. White, a butcher, has noticed a growing scarcity of rabbits on his trips afield, so this year he ordered 100 pair of breeding stock from a game farm, and gave each of his customers one pair as a Christmas present. The customers were asked to release the rabbits on suitable land, and sportsmen feel confident that next year will see a marked increase.

DANGER IN SUNSHINE

It was in a country churchyard. The morning sun was shining brightly and rapidly melting the snow from the grass. "A little more of this weather and things will begin to spring up," remarked a passer-by casually to an old gentleman seated on a bench.

"Hush!" replied the old man. "I've three wives buried here."

SWANS IN YELLOWSTONE

There are two species of swans found in Yellowstone National Park — the trumpeter and whistling—according to ranger-naturalists. The trumpeter, once quite abundant in western America, is nearly extinct. The whistling swan is a common fall migrant, appearing in October or later. Quite a number remain all winter within the park.

Baby Chinks

HERE'S a splendid picture of two handsful of baby Chinese pheasants taken at the state game farm at Warm Springs by Paul J. Fair. This picture forms part of a reel displaying activities of the State Fish and Game Commission at the farm which is now being shown to sportsmen of Montana. The tiny chicks are hatched and mothered by domestic biddies.

Trapping Deer In Yosemite

DEER on the floor of the valley in Yosemite National Park became so numerous that they threatened to destroy many species of wild flowers and shrubs which park officials are trying to conserve for the enjoyment of the public. The park authorities, therefore, decided to transport a number of them to the Hetch Hetchy region of the park, which had been almost depopulated of deer by the hoof-and-mouth disease epidemic of 1924.

According to information recently received from Mr. C. G. Thomson, the superintendent of Yosemite, during the last six or eight months of 1930 the Service trapped and transferred 90 deer of all ages, all of them black-tails, from Yosemite Valley.

The deer on the floor of the valley are accustomed to being fed by tourists and residents, and are tame. They are easily trapped—but then the officials have found that they are no longer peace-loving animals. They fight for freedom and actually fight with each other during the 45-mile ride to their new home.

Park officials say the transferred deer will remain where released, as 35 head transported to the same locality in 1929 are still in the region where liberated.

Ghost Wardens

ILLEGAL hunting and fishing has dropped off sharply in a certain California district as a result of a happy thought on the part of Captain Walter B. Sellmer of the California Fish and Game Patrol. Captain Sellmer's method puts an imaginary game warden behind every rock and tree in the most tempting of forbidden fish and game country, and it has proved most successful in breaking down the bravado of the game-hogs who "aren't afraid of the law."

Captain Sellmer adopted his present method after he discovered that a game warden, to be 100 per cent efficient, would have to be in dozens of places in his district at the same time. Since this wasn't possible, he resorted to cleverly worded signs which are now posted in such places that they seem to jump out at the prospective poacher just as he finds a likely-looking trout pool, or a bit of ideal quail cover.

The signs are intended to shatter the poacher's peace of mind, and they seem to be doing this very well. Some of them read:

"GAME WARDEN SELLMER WILL BE HERE TODAY—He Might Be Watching You Right Now."

Others say:

"Is Game Warden Sellmer Watching You Now?"

Or: "This Stream Is Patrolled Daily By Game Warden Sellmer."

Or: "Game Warden Sellmer Has a Temporary Camp 180 Yards Ahead."

Judging by the decreased amount of illegal hunting and fishing in his district, Captain Sellmer believes that it pays to advertise.

OUT WEST

She was a solicitous old lady with a yen for visiting jails and reclaiming men. She was making her rounds at a small western jail a short time ago and looked in one cell with particular interest as its occupant was a gaily garbed cowboy.

"My dear man," said she, "how long have you to be here?"

"Two weeks," came the answer.

"What for?" asked the gentle old lady next.

"Stealin' 500 hosses."

"And they gave you only two weeks?" asked the lady in astonishment.

"Yeah," answered the cowboy, "then I gets hung."

MISTAKEN IDENTITY

"You are charged with stealing a turkey," said the judge. "Anything to say?" "I just took it for a lark, sir," said the prisoner. "No resemblance, whatever. Ten days."

ONLY TO TALK ABOUT

Friend Bill: Does she know Mrs. Jones well enough to talk to?

Maggie: No, only to talk about.

Alkali Poisoning of Ducks Bacterial Disease

THAT "alkali poisoning" of waterfowl, a malady that has killed literally millions of ducks and other wild fowl in western states during the last two decades, is not due to the toxic action of "alkali" but instead to a malady of bacterial origin, is the opinion now held by scientists of the Biological Survey of the United States Department of Agriculture, who have been working on the problem in collaboration with specialists of the Bureau of Animal Industry. More specifically, the duck sickness is a form of botulism, caused by the poison elaborated by a bacterium known to science as Clostridtum botulinum, type C. This decision has been reached after two seasons' investigation of the problem in southern Oregon and northern California.

This study, reported on briefly in Science, December 26, 1930, was prompted by the growing conviction of recent years that factors other than alkali might be to blame at one or another of the widely scattered points at which this malady appeared. In some of the places where countless thousands of waterfowl had perished, alkali, though present, was in such negligibly weak concentrations that its direct toxic effect on wild fowl seemed improbable. At other points also where alkaline salts appeared in quantities that might be great enough to be a source of danger if consumed by birds, waterfowl mortality was insignificant or unheard of. Attempts to reconcile circumstances such as these as well as attempts to produce true symptoms of the disease by the experimental feeding of natural and synthetic "alkali" met with such frequent failure in this recent study that the previously rejected idea of a bacterially produced disease was reconsidered. Further impetus was given to study along this line by circumstances occurring in the course of the past season's field experiments that pointed strongly to the correctness of a bacterial theory.

There still remains much to be learned, and final statements will have to await the results of additional laboratory and field work. Experimental work has shown that duck sickness symptoms including all the reactions characteristic of that disease may be imparted to healthy, non-immune birds by feeding certain body tissues of birds that had died of the sickness after these tissues had undergone a period of incubation. The product of this process of incubation is highly toxic.

The uniformity with which duck sickness symptoms may be produced through this means has not been equalled in other experimental work of the investigators. Not only have these results been obtained from specimens collected in southern Oregon and northern California but material collected at the Bear River marshes in Utah has given similar results and to that extent gives evidence of a similarity of the trouble at these two points.

Specialists of the Bureau of Animal Industry have taken up in the bacteriological laboratory the chain of evidence brought in from the field. Cultures of muds from infected areas, and of the tissues of birds themselves, have yielded results that fully corroborate theories entertained by field workers. It has been definitely shown that the western duck disease is a form of botulism, caused by the poison elaborated by Clostridium botulinum, type C. About ten years ago this type of the botulinus germ was discovered in this country in the larvae of the green fly, Lucilia caesar, and since then a number of outbreaks of botulism caused by that organism have been reported in several parts of the United States among domestic chickens, ducks, and swans.

Ducks affected with this disease exhibit symptoms of marked weakness of the leg, wing, and neck muscles. In the early stages there is unsteadiness in walking, inability to fly, a tendency to move the head from side to side and backward, and failure of the nictitating membrane of the eye to function. Later the bird assumes a prone position and is unable to rise, the neck muscles gradually lose their power, and the head droops to the ground. The breathing is slow and often accomplished by opening the bill. Death may ensue in from a few hours to several days after the onset of symptoms.

Experiments conducted during the last year demonstrated that the disease could be reproduced at will by the artificial feeding of culture filtrates of Clostridium botulinum, type C, recovered from the mud and water from an area of Tule Lake, where the affection was prevalent. The same type of botulinus organism was also recovered from several species of wild fowl (mallard and pintail ducks and a gull) that had died of the disease.

Combative or preventive measures that suggest themselves would apparently be the same as those employed to remove excessive alkali, namely, the maintenance of deep, fresh water and the elimination of areas of mud flats with their decaying animal and vegetable matter during periods of hot weather.

What Is Success?

It's doing your job the best you can,
And being just to your fellow man;
It's making money, but holding friends,
And staying true to your aims and ends;
It's figuring how and learning why,
And looking forward and thinking high;
And dreaming a little and doing much;
It's keeping always in closest touch
With what is finest in word and deed,
It's being thorough, yet making speed.

The Other Two Hunters Are Behind the Barn

WHEN the geese were flying high on their annual migration, Montana sportsmen bagged enough to grease a skillet. This unusual bag was killed on the Missouri River near Poplar, Mont., by Sherman Cook of Helena and his party. While the two sportsmen in the picture apparently have strung up more geese than the law allows, they explain that there were "four of us guys."

Fishing Through the Ice at Georgetown

AT the annual meeting of the Montana Sportsmen's Association, held at Helena, January 9-10, the organization unanimously passed a recommendation to the state legislature that the laws be revised to make it illegal to fish or hunt with the use of artificial lights. In keeping with the situation, delegates from Silver Bow and Deer Lodge counties cited conditions at Georgetown lake where hundreds of anglers are taking fish through the ice. The law now provides that fishing shall not be allowed on the lake, where the largest spawn taking station in the world is located at the mouth of Flint Creek, after 9:30 p. m. During the winter, however, when days are short, automobile lights and fires on the ice light up the vicinity.

George B. Winston, judge of the district court at Anaconda, and for years recognized as one of Montana's constructive sportsmen, submits the following article published in the current edition of The Philipsburg Mail:

"Granite County Waltonians are experiencing a different sensation in the field of sport than ever before. For as one approaches Georgetown lake after dark, for an evening of sport at fishing through the ice, he experiences all of the sensations obtained from coming off of the Continental divide by the way of Harding Drive at midnight, and looking at the city of Butte as presented by its elaborately lighted districts.

"In the daylight Georgetown lake presents the appearance of a vast waste of snow and ice with only an occasional fisherman or party of fishermen scattered about over its snowy bosom. At night the scene is entirely changed and from the highway the lake appears as a city lighted for the convenience of its inhabitants and the pedestrians and drivers on its streets. As one drives out across the lake, however, he finds, instead of shops and traffic cops, hundreds of lighting contraptions, camp fires, and shelters for the comfort of those using them, all with a common purpose, that of drawing a mess of Georgetown lake trout safely through the ice and into his fishing creel.

"And the actual fishing itself is in no way spectacular, for the process is one of cutting a small hole, possibly eight inches in diameter, through the ice, and sinking therein a line upon which is a small hook holding some kind of bait. Neither does the fish bite savagely as when taken in open water, but, instead, one has to watch carefully to see that his quarry is interested at all, and when he observes the slightest disturbance of his cork, it is up to him to get busy and pull his fish through the hole in the ice provided for that purpose. All the fish as caught make no particular objection to being landed on top of the ice, and when so landed show little animation, a sort of an inert condition which seems to be attendant upon trout being taken from icy waters, a marked contrast with the fighting propensities of the same fish taken from the summer waters of our mountain lakes and streams.

"This innovation in trout fishing holds no lasting attraction for the angler charmed with the snap of his pet fly rod and usual vim and speed of our native fish in open waters, though it is recommended that every local sportsman who fishes at all should not miss the opportunity of viewing the spectacle just described, and himself chopping a hole in the ice of Georgetown lake and trying his luck."

Boy Scouts

Character development is the objective of Boy Scout Training.

Character—more essential than any other attribute to success in life—is frequently left to chance development.

Boy Scout training makes a boy physically strong, mentally awake and morally straight.

It makes real boys.

It makes real men of real boys.

1929 was the 20th year of Scouting in America.

In 1929, nearly 4 million boys of 12 to 17 years of age—Boy Scout age—were or had been Boy Scouts.

More than one million boys were enrolled in 1929 as Scouts.

More than 53,000 men gave their time as scoutmasters and assistants.

More than 174,000 additional men gave part of their time to act as council men and troop committee men.

There are annually nearly 325,000 boys in scout camps learning to take part in camp sports.

In the scout method of developing character, the boys are awarded merit badges for proficiency in 90 trades, professions, hobbies, sports and miscellaneous undertakings.

Scout training develops the power of initiative and resourcefulness.

In scout training, wholesome and attractive outdoor activities hold the interest of the boy. The scout laws govern his conduct and guide his habits.

Boy Scout training anchors the boy to the habit of right living.

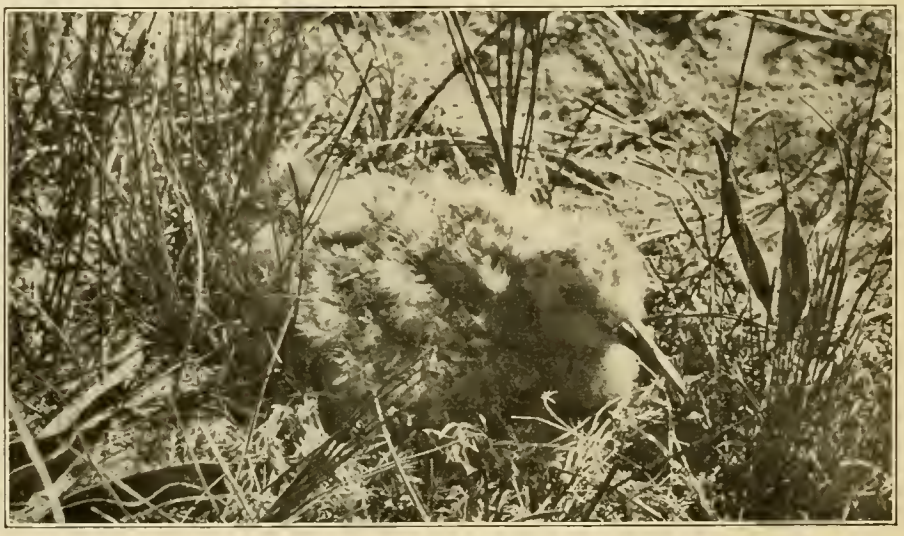
It insures good citizenship.

"Honey, if you really do like this ukulele, I'm going to give it to you."

"An out-and-out gift?"

"Absolutely; there's no strings to it."

Baby Curlew Poses for the Camera Hunter



THIS young long-billed curlew, photographed by Paul J. Fair of the State Game and Fish department, has not attained such proportions that his bill classifies him among older members of his family. The long, curved bill develops as the bird grows older and he will soon be able to stretch his lengthy legs and enter into the gaiety of things with his cousins, uncles and aunts.

Quail for Sportsmen of Montana

EXPERIMENTS conducted by the State Fish and Game Department at the state game farm at Warm Springs have proved eminently successful in the rearing of Chinese pheasants for liberation and attention is now being turned to the plan of releasing California Valley quail in desired spots in the state for the joy of sportsmen who thrill to the whi-r-r-r-r of the Bob White and the zig-zag course of his flight. Years ago quail were planted in the Bitter Root valley. They have proven successful despite weather that has been rugged at times. Several pairs of California Valley quail—the blue boys with the curly topknots—are now being observed at the state game farm. A shipment of several hundred pairs has been acquired for release in areas deemed most desirable.

Experiments have proved that native upland birds such as the blue grouse, native pheasants, sage grouse and others can not be successfully reared in captivity. The Chinese pheasant, however, thrives and breeds prolifically. During the first year's operation of the state game farm at Warm Springs, the state fish and game department liberated 6,146 Chinese and Mongolian pheasants in 55 counties. It will not be many years, if the conservation campaign continues, until the same situation will prevail with quail.

Every now and then a situation arises which, while in itself most deplorable, proves to be a blessing in disguise. We rarely prepare for a crisis until we have passed through at least one. All of the states which were most seriously affected by the drought of 1930 report an appalling shortage of the quail crop last fall.

Many state officials and leading sportsmen state that there were practically no young birds reared. They report that the shortage of moisture reduced the usual crop of insects for the young birds last summer; that the cover and weed crop was far below normal; and that grass fires were so numerous that many thousands of young quail perished.

Due to the shortage of forage crops, hay fields which would ordinarily not have been cut were mowed clear, and cattle were compelled literally to eat the ground bare in localities where ordinarily good cover is abundant right through the season.

Field studies made by representatives of the American Game Association report that the reduced cover gave a wide open break at Bob White and his family, and that covey after covey of young birds was wiped out by these vicious enemies who hunt 365 days every year.

Most hunters kill old quail only. Missouri reported only a 50 per cent quail crop. When conditions became known to the state game officials and the conservation leaders, the Missouri Council of the Izaak Walton League declared a moratorium on quail for the remainder of the season. The state game department and the governor were absolutely helpless, and in the absence of official authority to act, an appeal was made through the press and posters. Sportsmen were urged "to put up their guns and declare a moratorium on quail for the rest of the season."

Equally serious conditions were reported by Indiana, Illinois, Kentucky, Tennessee, Missippi, Virginia, Maryland, Tennessee, Mississippi, Virginia, Maryland, Florida, and numerous other states. Major A. Willis Robertson, chairman of the Virginia Game Commission, among other things said: "The 1930 hatch of quail, including those that perished before reaching maturity, was not more than 25 per cent of normal. Food and cover conditions are the worst I have ever known, and the hawks are playing havoc with the few birds that are left."

A competent observer, who covered Tennessee, Mississippi, Arkansas and other neighboring states, says those states experienced the most acute quail shortage in ten years. At the time of his report, he said: "A number of petitions have been received by Howell Buntin, state game warden of Tennessee, asking that the season on quail be closed at once, an action which he is powerless to take due to legal obstacles."

This observer confirms reports from numerous others to the effect that the hatch of quail last spring was unusually good, but the young birds came off just at the beginning of the drought. Birds which laid a second nest of eggs after their first clutch of eggs had been destroyed by predators, among the worst of which were stray, half-starved field-hunting dogs, due to excessive heat and lack of moisture, failed to hatch their second lot of eggs.

He states that in the cotton raising sections the usual invasion of army worms appeared, and poison sprays were resorted to to check their ravages, and it is generally believed that in those localities many quail perished from drinking the deadly liquid in an attempt to quench their thirst. This is a most plausible deduction, because it is a well-known fact that in potato growing sections entire coveys of quail are frequently wiped out by sipping poison sprays and by eating the poisoned potato beetles.

Guy Amsler, the Executive Secretary of the Arkansas Game and Fish Commission, reports: "Literally hundreds of appeals were addressed to the Commission asking that the rest of the present season be closed, and seemingly such should be done. However, under our present system any immediate relief is impossible, and immediate relief is the only kind that would be of any value. At present the Commission has no discretionary power, even in extreme emergencies."

We could cite many more equally distressing reports. In the present emergency extensive winter feeding and sensible predator control activities are absolutely imperative. This spring the remaining birds should be trapped and the coveys scattered and intermixed. They may also be broken up just before the mating season through the use of bird dogs.

The present situation, which is not confined to quail alone, clearly proves the contention of the American Game Association and conservation leaders generally that the only way to save the seed stock in such emergencies is to give the state game departments broad discretionary powers.

Out In the Fields With God

The little cares that fretted me,
I lost them yesterday
Among the fields above the sea,
Among the winds at play,
Among the lowing of the herds,
The rustling of the trees,
Among the singing of the birds,
The humming of the bees.
The fears of what may come to pass,
I cast them all away
Among the clover-scented grass,
Among the new-mown hay,
Among the husking of the corn,
Where drowsy poppies nod,
Where ill thoughts die and good are born,
Out in the fields with God.

Vigilantes of Montana

A CHRONICLE OF
THE OLD WEST

How They Disposed of
BAD MEN
In the Sixties!

A full account of the capture and execution of

HENRY PLUMMER'S ROAD AGENTS

By PROF. THOS. J. DIMSDALE
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286 pages of frontier adventure, with historical reference to Virginia City and other western communities.

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Sportsmen's Money In Bounty Fund

UNDER Montana's state law as now effective, 25 cents out of every fee collected for a hunting and fishing license must be placed in the biological fund from which bounties are paid on predatory animals and from which fund comes the money to employ paid trappers and hunters to exterminate beasts preying on game, cattle and sheep. In this work the State Fish and Game Department cooperates with the Montana Livestock Commission and the U. S. Biological Snrvey. In 1929 bounties were paid on coyotes, mountain lious and wolves trapped during the whelping season of April, May and June, totaling $9,148, while in 1930 this sum reached $9,336. The counties receiving the larger amounts on coyotes at $2 each were Beaverhead, Fergus, Carter, Garfield, McCone, Petroleum, Phillips, Prairie, Richland, and Roosevelt. In several of these counties more money was paid in bounties than was invested in fishing and hunting licenses. The following bounty figures for the biennium have been compiled by the State Livestock Commission:

	1929	1930
Beaverhead	$1,040	$ 938
Big Horn	24	8
Blaine	490	600
Broadwater	16	24
Carbon	108	.....
Carter	468	256
Cascade	212	408
Chouteau	110	26
Custer	26	56
Daniels	88	138
Dawson	232	150
Deer Lodge	.....	.....
Fallon	194	180
Fergus	1,620	2,254
Flathead	.....	2
Gallatin	120	76
Garfield	64	102
Glacier	14	6
Golden Valley	14	42
Granite	.....	.....
Hill	924	712
Jefferson	.....	.....
Judith Basin	62	62
Lake	.....	34
Lewis and Clark	10	.....
Liberty	144	138
Lincoln	.....	.....
McCone	136	96
Madison	22	34
Meagher	6	.....
Mineral	2	.....
Missoula	60	.....
Musselshell	84	60
Park	42	34
Petroleum	128	146
Phillips	708	612
Pondera	78	70
Powder River	226	372
Powell	8	.....
Prairie	74	.....
Ravalli	.....	.....
Richland	146	104
Roosevelt	542	558
Rosebud	2	34
Sanders	.....	.....
Sheridan	182	64
Silver Bow	.....	24
Stillwater	194	102
Sweet Grass	78	44
Teton	132	290
Toole	12	8
Treasure	.....	20
Valley	120	128
Wheatland	140	314
Wibaux	30	8
Yellowstone	16	2
Total	$9,148	$9,336

Full of Wisdom

The wise old owl is a familiar figure to Montana boys and girls who engage in predatory bird and animal contests. He's viewing his surroundings with field mouse or chicken in mind and with his appetite whetted.

AUTOMATICALLY SPEAKING

Liza at the zoo saw a zebra for the first time. "Rastus," she said, "what kind av animal am dat?"

Rastus also gazed in much perplexity and awe. He had never seen one before, either. "Why, Liza, dat am a sport model jackass!"

NO OPEN SEASON ON THESE

"Any good shooting on your farm?" asked the hunter of a farmer.

"Splendid!" replied the agriculturist. "There's a threshing machine salesman down in the meadow; a farm relief congressman in the hay loft; a vacuum cleaner peddler in the house; a radio salesman coming in the front gate; a candidate down at the barn, and two tramps in the corn crib — need any shells?"—Life.

Progress Brings Better Gear

WITH better equipment, wearing apparel, automobiles and boats, the field sports of hunting and fishing, boasting 25,000,000 devotees, more than any other sports in the world, have been making progress without failing to provide a thing—except the fish to catch and the game to hunt.

Thus William C. Adams, director of the Massachusetts Department of Conservation, sized up the seriously one-sided condition of field sports today. He made the statement in stressing the importance of the establishment of a national game conservation and restoration policy.

"We have made definite improvement in equipment," he declared, "but have neglected the most important feature of all. The fish aud game supply has been steadily diminishing. Building up a wild life stock has not kept pace with the development of devices to take that stock.

"Only within the last few years," Mr. Adams said, "have we realized that providing an adequate supply of fish and game is the most important part of the business administration of the sports.

"Sportsmen, manufacturers, owners of land and water, and the millions of people who enjoy wild life but do not hunt or fish," he said, "are all parties at interest in the forming of a definite policy to follow in restoring the former abundance of wild life."

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Department of Anaconda Copper Mining Company, Butte, Montana

Deer Crave Food In Snow-Covered Areas

DURING the winter season, when much of the natural big game food is blanketed by a snow mantle, Montana deer forget their fear and frequently learn to wend their way back to homes of farmers where they know they will be given kindly attention. These white-tailed wizards of the woods are accepting morsels from the hand of the little tot and return day after day for their rations.

ROMANCE OF WILD LIFE

A pretty little shopgirl stood on the corner. Up came a long, yellow, expensive car.

"Want a ride, girlie?" questioned the large, handsome man in it. He was dressed magnificently. Silver glittered on his vest; his black eyes sparkled and his black mustache glistened. "Want a ride?" he repeated.

"No!"

"We're going your way."

"No!"

"Oh, come on. You'll see the bright lights if you come."

"No!"

"Oh, please. Do come."

"No!"

"Please," (he smiled a winning smile, whatever that is).

"We-l-l—"

And so the little shopgirl got in and the handsome man rang up the fare and the street car went on down the street.

THEM WERE FIGHTING WORDS

Magistrate: Now tell me what started the trouble.

Witness: I asked him quite perlitely who was going to be buried and he answered, sarcastic like: "I dunno; I s'pose it's the gentleman in the hearse."

SUBSCRIPTION COMBINATION

American Game Protective Association,
2273 Woolworth Building,
New York City, N. Y.

Herewith find remittance of $2.00 for membership in the Association including subscription to "AMERICAN GAME" and "MONTANA WILD LIFE."

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Membership in American Game Protective Assn.
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MONTANA WILD LIFE
} $2.00

If you are already a subscriber to "MONTANA WILD LIFE" and wish to renew for one year from the expiration of your subscription please mention that fact.

Add 50 cents for Canadian postage; $1.00 for foreign postage.

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Date.....

A BOY'S ROOM

A young lad's room is different from any other room in the home. It is essentially plain and should be equipped for study or play. The boy himself should be given his choice as to color schemes and furniture. Simple, colorful hangings, sturdy furniture, and plenty of open shelves for his books and treasures are desirable. A smooth finish floor with scatter rugs is more easily kept clean than a large rug. Let him feel that it really is his room and that he may do in it just about what he wants but that he is responsible for taking care of it. Permit him to have the things he is really interested in if he agrees to keep them in order. It isn't necessary to have a cluttered room. Neither is it wise to be constantly discarding his things which seem useless to you but are priceless to him.

AN ILL-CONSIDERED ASSERTION

First Prisoner: "Judge, he's the biggest fool I ever had the bad luck to set eyes on."

Judge: "Order, order! You seem to forget that I am here!"

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Sportsmen Approve Adjusted License

SPORTSMEN of Montana in 48 organizations have gone on record in recommendations to the state legislature, asking that the law be revised to permit sportsmen to invest a slightly larger amount in hunting and fishing licenses in order that the campaign of constructive conservation of wild life of the Treasure State may proceed without handicap. Four clubs, as against the 48 favoring the increase, have announced themselves as opposed. Clubs listed include practically all active organizations of anglers and hunters in the state. In some cases where action has been taken, reports have not been made to B. F. Gerry, secretary of the Montana Sportsmen's Association at Missoula headquarters.

At the annual meeting of the Montana Sportsmen's Association at Helena, attended by delegates from affiliated clubs, recommendations were thoroughly discussed and the split license fee plan adopted. Since 1921, the resident hunting and fishing license fee in Montana has remained at $2. Under the proposed split license plan the charge for fishing will be $2, for hunting upland birds and migratory waterfowl, $2; a combination fishing and bird license, $3, and a big game license $2, with deer and elk tags attached.

When the license fee was placed at $2, Montana had but three fish hatcheries. Fourteen hatcheries and five spawn taking stations are now maintained and operated by the State Fish and Game Commission. Increasing inroads are being made on forest, field and stream and continued efforts must be put forth to keep pace with progress.

Funds of the department have reached the lowest mark in years because of the increased demands for rearing ponds, for expenditures at the state game farm at Warm Springs, for biological research, the creation of artificial lakes for the propagation of migratory water fowl, and similar projects intended to maintain the supply of fish and game.

While the drain on the wild life heritage has been growing to an alarming stage, Montana's State Fish and Game Department has continued plans for enlarging the capacity of the state game farm, rearing of larger fish for liberation, the construction of additional rearing ponds, continuation of the campaign against predatory birds and animals, the planting of fish by trained men capable of assuring the minimum loss, surveying the waters of the state with regard to their qualities for species of fish, planting of eyed eggs in almost inaccessible lakes and streams high in the mountains, coping with the problem of the loss of fish in irrigating ditches, the planting of more duck food, the liberation of more game birds, stocking of warm water streams of eastern Montana, acquiring public shooting grounds and similar projects. With the slight increase in the hunting and fishing license fees, many of these foresighted plans will be made possible.

Clubs of sportsmen which have approved the adjustment and which have requested their legislators to act favorably on the measure include the following, showing the county, city and club:

Missoula—Missoula—Montana Sportsmen's Association.
Cascade—Cascade — Chapter Izaak Walton League.
Deer Lodge—Anaconda—Anaconda Anglers Club.
Stillwater—Absarokee—Stillwater Rod and Gun Club.
Roosevelt — Bainville — Bainville Rod and Gun Club.
Gallatin—Belgrade—Belgrade Rod and Gun Club.
Yellowstone—Billings—Billings Rod and Gun Club.
Gallatin—Bozeman—Bozeman Rod and Gun Club.
Glacier — Browning — Browning Rod and Gun Club.
Carbon—Red Lodge—Red Lodge Rod and Gun Club.
Silver Bow—Butte—Butte Anglers Club.
Teton—Bynum—Bynum Rod and Gun Club.
Teton—Choteau—Choteau Rod and Gun Club.
Powell—Deer Lodge—Deer Lodge Rod and Gun Club.
Beaverhead — Dillon — Beaverhead Sportsmen's Association.
Valley—Glasgow—Glasgow Fishing Club.
Ravalli—Hamilton—Hamilton Sportsmen's Club.
Big Horn—Hardin—Big Horn County Rod and Gun Club.
Wheatland—Harlowton — Upper Musselshell Valley Sportsmen's Association.
Hill—Havre—Hill County Rod and Gun Club.
Lewis and Clark—Helena—Lewis and Clark County Rod and Gun Club.
Liberty—Joplin—Joplin Rod and Gun Club.
Flathead—Kalispell—Flathead Game Protective Association.
Yellowstone—Laurel—Laurel Rod and Gun Club.
Fergus—Lewistown—Lewistown Rod and Gun Club.
Custer—Miles City—Custer Rod and Gun Club.
Missoula—Missoula — Western Montana Fish and Game Association.
Fergus—Moore—Moore Rod and Gun Club.
Lake—Polson—Polson Rod and Gun Club.
Toole—Shelby—Toole County Sportsmen's Association.
Broadwater—Townsend — Cottonwood Isle Rod and Gun Club.
Pondera—Valier—Valier Rod and Gun Club.
Flathead—Whitefish—Whitefish Rod and Gun Club.
Lincoln—Libby—Libby Rod and Gun Club.
Rosebud—Forsyth—Forsyth Rod and Gun Club.
Fergus—Roy—Roy Rod and Gun Club.
Sheridan—Plentywood—Izaak Walton League Chapter.
Dawson—Glendive—Dawson County Rod and Gun Club.
Sanders—Plains—Plains Rod and Gun Club.
Sanders—Thompson Falls—Thompson Falls Rod and Gun Club.
Jefferson—Whitehall—Whitehall Rod and Gun Club.
Chouteau—Carter—Carter Rifle Club.
Madison — Waterloo — Waterloo Rod and Gun Club.
Teton—Choteau—Choteau Rod and Gun Club.
Judith Basin—Stanford—Stanford Rod and Gun Club.
Silver Bow—Butte—Butte Gun Club.
Lewis and Clark—Helena—Montana Association of Commercial Organization Secretaries.
Park—Livingston—Kiwanis, Rotary and Commercial Clubs.

Clubs which have gone on record as opposed to the adjusted license fee are Great Falls, Hobson, Lima and Moccasin.

Oklahoma's Idea of a Game Farm

WHEN Oklahoma starts a game farm, it's a game farm of honest-to-goodness dimensions. The state decided last summer to try a new plan for increasing the supply of Bob White quail, so 20,000 acres of choice quail cover was obtained under a long-time lease for the raising of quail under natural conditions.

The state has placed a superintendent in charge of this huge area to carry on such needed work as the control of predatory animals, the planting of feed patches, the provision of winter food and shelter, etc. This spring it is planned to trap about 2,000 birds on this area and remove them to other areas in the state for restocking purposes.

This experiment, taking a new direction in the field of game-raising, will be watched with great interest by other states, and it seems quite likely that the results foreseen will justify imitation in other states where the problem of keeping the Bob White population on the upgrade has not been yet completely solved.